COMPARATIVE ANALYSIS OF FAMILY BENEFITS
IN GERMANY, BELGIUM, FRANCE, GREAT BRITAIN
AND LUXEMBOURG

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Summary

In an outlook on the social Europe, one may wonder how important differences are between the existing national rules for social protection in the different European countries, how far does one have to go before reaching a sufficiently close level of proximity where the principle of subsidiarity is accepted. That is what a recent study [1] has tried to do -by focusing only on the *monetary benefits of the family policy*- carried out by the team Analyse Dynamique des Effets des Politiques Sociales (ADEPS), for the French Caisse Nationale des Allocations Familiales, in collaboration with CEPS/INSTEAD in Luxembourg, CSB in Antwerp and ESRI in Dublin.

It is not sufficient to only analyse the global generosity levels in the different countries in order to compare the national family policies across countries. It is also necessary to compare the effects of these policies. The evaluation of the effects of family policies, which should be done with regard to their implicit or explicit objectives, gives rise to continuous and ill defined discussions. It seems to us that the debate revolves round the difficult question of the definition of *neutrality* often attributed to family policies. That is why, in the first part, the paper discusses this concept and, as a second step, introduces the methodological approach which lies more classically on the notion of *redistributive effect*. Finally, in a third part, we comment on the results of the five countries comparative analysis.

The analysis of the concept of neutrality applied to family policy as part of redistribution does not conclude with a proper definition of neutrality or equity but shows the ambiguities of the notion insofar as these definitions can lead to contradictory systems of benefits : equal benefits, benefits increasing with cost of children or in favour of the least well-off.

The distinction between horizontal and vertical dimensions is taken into account in the analysis of equity as well as redistribution. Where horizontal equity requires equal treatment of equals (families with the same characteristics), horizontal redistribution analyses differences of treatment between unequals (families belonging to a group of people with a particular characteristic such as a certain number of children, whatever their income level). Where vertical equity requires unequal treatment of unequals, vertical redistribution analyses differences of treatment between unequals (families are only characterized by their level of income).

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[1] B. Jeandidier, J.-L. Kop, J.-C. Ray, E. Jankéliowitch-Laval, N. Bastian, "Analyse et simulation de politiques de prestations familiales en Europe : une comparaison entre la France et l'Allemagne, la Belgique, l'Irlande et le Luxembourg", rapport pour le compte de la CNAF, décembre 1995, 374 p.

As far as methodology is concerned, our approach was pragmatic and inevitably, partly arbitrary. In fact, we selected a set of *specific redistributive dimensions* which, we thought, could enable a kind of consensus concerning the objectives, in the field of family policies, which have to be evaluated. Therefore, we adopted an analysis plan which consisted in studying the following redistributive effects :

- **vertical** redistributive effect, i.e. along with the households monetary standard of living, family benefits excluded,
- **horizontal** redistributive effects :
* along with the number of children ;
* along with the age of children ;
* along with the schooling level of the children ;
* depending on whether the child suffers from a handicap or not ;
* along with the number of parents (loneparenthood) ;
* along with the parents activity status.

Between the lines of these different dimensions, one can find objectives of family policy which are commonly admitted : birth aid, aid to young childhood, compensation of the child cost, aid to single-parent families, reduction in the standard of living inequalities, aid to conciliate professional and family lives.

The research report of ADEPS treats the subject successively along with these five methodologies (analysis of global statistics issued by the organisations which manage the family policy, analysis of the different regulations, analysis by family-types, analysis by micro-simulation, analysis of data of suveys) but in this paper we will take only the results obtained from the last approach, i.e. on the basis of *exploitation of the data declared in the different national surveys* of the Panel Comparability Project (PACO) [2].

One can first determine that in the five countries there is, all other things being equal, an effect of <u>vertical redistribution</u> which is statistically significant. Regression coefficients associated to the variable of monetary standard of living, family benefits being excluded, confirm the hierarchy between the countries which we had deduced from the calculation of Gini coefficients : France would be the most redistributive country, followed by Belgium and Luxembourg, then Germany and finally Great Britain.

From the viewpoint of <u>redistribution according to the number of children</u> aged less than 21 years, the effect is also very clear in the five countries. In Germany, this effect is the most progressive ; Belgium and Luxembourg have an intermediary position and, in Great Britain, the redistributive effects are close when there is more than one child. The case of France is a slightly particular as the French family policy originality is, on one hand, to grant no Child Benefit to families with only one child and, on the other hand, to increase strongly the Child Benefits for families with three children.

From the viewpoint of the <u>activity status of the head of the household</u>, redistributive effects are less easily observed : in Belgium, in France and in Great Britain, family benefits would be bigger for

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[2] The socio-economic panel "Liewen zu Letzebuerg" (PSELL) for Luxembourg, the Lorraine socio-economic household survey (ESEML) for France, the Socio-Oekonomisches Panel (SOEP) for Germany, the survey "Les conditions de vie des ménages en Belgique" for Belgium and le British Household Panel Study (BHPS) for Great Britain. Except Belgium, the data come from the PACO base (Panel Comparability Project) managed by CEPS/INSTEAD at Luxembourg.

households with a wage earner head (by opposition to households with an independent worker head) ; in Luxembourg, the family allowance policy would be, all things equal, quite unfavourable to inactive head of households and the German family policy would combine these two effects (positive effect in favour of wage earner people with job and negative effect in favour of inactive people). However, to carry out an accurate analysis, it should be necessary to take into account the activity status of the wife/husband of the head of the household ; that was not possible because of a strong multicollinearity with the variable of marital status.

Regarding the redistributive effect in favour of single-parent families, it is difficult to analyse it from the regression concerning the population in the whole : the effect attributed to loneparenthood is therefore due more to the situation of lonely persons without children than to the situation of single-parent families. That is why we have extended our study by limiting the analysis to the only population constituted by households having at least one child aged under 21 years.

In this second approach, except Belgium, no country is showing a particularly generous family benefits policy in favour of single-parent families. In countries where an allowance for single-parent exists (France, Great Britain, Germany), the redistributive effect attributed to the fact that this allowance is means-tested is probably already taken into account in the explicative variable of vertical redistribution. In case of Belgium, the positive effect observed is very likely due to the Child Benefits for orphans which, on the contrary, are not subject to an income condition. We were able to introduce an explicative factor to measure the effect of redistribution in favour of small childhood : the age of the youngest child. It is quite interesting to state that in three countries the expected negative effect is observed (Germany, France and Luxembourg). But the English family policy would not show, *ceteris paribus,* any effect of help to small childhood and, in Belgium, an anti-redistributive effect would be observed. In case of Belgium, one may explain this result by the absence of education allowance (paid to mothers who stop work after a birth), comparatively to what exists in the three countries where the negative effect is observed.

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It is not sufficient to only analyse the global generosity levels in the different countries in order to compare the national family policies across countries. It is also necessary to compare the effects of these policies. The evaluation of the effects of family policies, which should be done with regard to their implicit or explicit objectives, gives rise to continuous and ill defined discussions. It seems to us that the debate revolves round the difficult question of the definition of *neutrality* often attributed to family policies. That is why, in the first part, we will discuss this concept and, as a second step, we will introduce our methodological approach which lies more classically on the notion of redistributive effect. Finally, in a third part, we will comment on our results of our five countries comparative analysis.

1. Family policy and the concept of neutrality.

The concept of neutrality is often used, but rarely strictly defined, in the field of social policies. This may be the result of two difficulties in apprehending the concept of neutrality. First, this concept is often applied to specific areas without reference to a general definition : for example, as far as distribution of health care is concerned, neutrality can be defined as an equal access for everyone to health care ; but

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[3] B. Jeandidier, J.-L. Kop, J.-C. Ray, E. Jankéliowitch-Laval, N. Bastian, "Analyse et simulation de politiques de prestations familiales en Europe : une comparaison entre la France et l'Allemagne, la Belgique, l'Irlande et le Luxembourg", rapport pour le compte de la CNAF, décembre 1995, 374 p.

the principle of equality of access has no meaning if applied to the fiscal system or family benefits [4] (except in terms of non-take up). Secondly, in a specific area, several conceptions of neutrality may coexist. For example, the French fiscal system is considered as neutral by LOUIS and MARCILLAC (1980) if it does not take into account the presence of children in the household. On the contrary, for STERDYNIAK (1992), the French fiscal system is neutral because the number of children is taken into account in the calculation of the income tax thanks to the fiscal allowance (quotient familial). However neither of these authors gives an explicit definition of neutrality.

In this paper the concept of neutrality is analysed from two perspectives : as a characteristic of family policy and as a characteristic of the redistribution policy (because family policy is considered to be part of the redistribution system). With this double reference in mind, we try to understand neutrality with respect to family policy.

Following VILLAC (1992), four different conceptions of intervention can be assigned to family policy :
- *to be neutral* (or absence of policy). In that case, the link between neutrality and family policy is clear : there is neutrality because there is no intervention in the field of the family. This conception is relevant to characterize family policy in Great Britain (even if there are family benefits, the government claims the family is a private matter, and then, that there is no global family policy). This conception of neutrality is subject to criticism if family policy is conceived as a system to correct inequities existing between different situations. In that last case, neutrality would refer to the absence of inequity. Then, the absence of policy can be considered as non neutral.
- *to facilitate choices relating to the way of life for people and families*. For example, family policy can be considered as neutral if it is a means to reconcile family life and professional life.
- *to have an incentive or normative objective*, on the contrary to the last conception, that is to say, for example, to encourage natality. This conception is then clearly opposed to neutrality as regards to the people lifestyles and can be used to promote or discourage particular family models such as the family with two parents (one breadwinner) and two children or such as lone parent families.
- *to respond to an insurance logic*. In this approach, family policy is conceived as a compensation when a risk occurs. Social security systems usually reflect this conception insofar as social transfers cover different types of risks : maternity and family, health (sickness invalidity), survivor and old age, employment (unemployment, occupational disease and disability). This conception is particularly adapted to pensions because the amount of the pension depends on contributions so that the system of pension is neutral if the sum of contributions corresponds to the sum of pensions (definition of actuarial neutrality). Nevertheless, this definition of neutrality in terms of risk does not fit to family concern because the occurrence of the risk (birth of a child) can be considered as voluntary.

These conceptions of family policy allow the concept of neutrality to be defined in three different ways : as a synonym of *equity*, as a synonym *of absence of incentive/disincentive* and, finally, as a synonym of *actuarial neutrality*. We have already said that the last definition does not seem appropriate to family policy. If we replace family policy as part of the redistribution system and focus this paper on **redistributive effects** of family policy (that is to say the direct effect on income of services and benefits from family policy) and exclude **effects of the redistribution** (that is to say the indirect effect on

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[4] Equality of access does not mean that everyone receives the same benefits or the same amount of benefit. Then, the existence of income related benefits, for example, does not infringe equality of access.

income of redistribution due to incentive/disincentive effect), there is just one definition of the concept of neutrality left : the neutrality as synonym of **equity**.

Equity is often invoked in social policy and family policy to justify, at least in part, the existence of benefits. However meanings of the notion of equity, like those of neutrality, are multiple. To analyse the extent of the concept, definitions of equity used in economic theory are a basis **from** which conceptions of equity of family policy can be derived.

In economic theory, six main definitions of equity are used. Equity is defined as equality of result, absence of envy, in utilitarist terms, in Rawlsian terms, as equality of choice and as the double principle of horizontal and vertical equity. After a short explanation of each of these definitions, we try to deduce a conception of equity applied to family policy.

- Equity as *equality of result* : this definition leads us to consider that transfers are equitable if people have the same income or the same standard of living (after having included transfers into the income or standard of living).

- Equity as *absence of envy* : in this case, an allocation of resources is equitable if no individual prefers another situation to its own. This definition of equity is ambiguous insofar as the basis on which people are compared is not specified : for example, can an individual envy another one because the other one receives a higher amount of family benefits if both of them do not share the same characteristics (such as the number of children, matrimonial status) ?

- Equity in *utilitarist terms* : in this case, equity is not strictly defined. An allocation is considered as equitable if it is the result of the application of utilitarist principles (but there is not a proper definition of equity) or if the allocation is egalitarian (under specific conditions to maximise the level of well-being of the society, the result of utilitarist principles is equality).This conception seems to favour lump sum transfers.

- Equity *according to Rawls*. For Rawls, in the initial position (that is to say a situation where individuals are under a veil of ignorance and do not know what will be their future situation in the society), individuals drawing up a social contract would choose two principles of equity : the principle of justice and the principle of difference [5]. In fact, individuals drawing up the contract are not concerned by equity but only with selfishness : they do not know their future situation and then try to maximise the situation of the least advantaged. In this conception, equity consists in maximising the situation of the least well-off. Applied to family policy, this could lead to the development of income related benefits.

- Equity is presented as *equality of choice*. This definition presented by J. Le Grand (1991) comes from the fact that, from his point of view, equity judgement does not result from the analysis of one characteristic or dimension but from multiple dimensions. The best way to take into account all of these characteristics is to consider choice sets of individuals [6]. Then, a distribution is equitable if it is the result of informed individuals choosing over equal choice sets. Applied to family policy, it would mean allowing individuals to have the same choice sets, which could result in equal benefits or different amounts of benefits in order to ensure equality of income.

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[5]The principle of justice means : "each person is to have an equal right to the most extensive total system of equal basic liberties compatible with a similar system of liberty for all (Rawls, 1972, p.250), and the difference principle (or maximin principle) : "social and economic inequalities are to be arranged so that they are to the greatest benefit of the least advantaged and attached to offices and positions open to all under conditions of fair equality of opportunity (Rawls, 1972, p.83).

[6] This conception of equity seems to correspond to equality of opportunity. Nevertheless, according to J. Le Grand, equality of choice sets isa broader notion than equality of opportunity (in its conventional use) because the former, contrarily to the latter, implies positive discriminations.

- The *double principle of horizontal and vertical equity* : this principle establishes a distinction between people according to their degree of equality so that horizontal equity is satisfied if equals are treated equally and vertical equity (complementarily) is satisfied if unequals are treated unequally. This definition leads to measures of inequity in terms of rank reversal : if the initial situation is considered as equitable, then, there should not be rank reversals due to transfers (if people are ordered by their income or standard of living level). In this case, to avoid rank reversal, family benefits could be equal for everyone as well as increasing with the rank of individuals.

From these definitions of equity, several characteristics of the concept of equity appear. First, in all of these definitions, equity implies a comparison of individuals. Secondly, these definitions refer, in one form or another, to a conception of equality. There are two different forms of equality called to mind : on the one hand, equality refers to individuals either before a form of intervention or redistribution (in the definition of horizontal and vertical equity), or after the intervention or redistribution (equality of result, absence of envy). However, sometimes the definition of equity is not precise enough to allow a classification between these two forms of equality (equality of choices can refer to a situation before or after redistribution). On the other hand, equality refers to the treatment of individuals (equity in utilitarist terms). The definition as regards horizontal equity and vertical equity has the advantage of expressing this double conception of equality and therefore is, from our point of view, the most comprehensive conception of equity.

From these general definitions of equity and particularly from the definition in terms of horizontal and vertical equity, application principles for to family policy and fiscality can be derived : for example, each individual has to pay his/her income tax according to his/her contributive capacities, or to each according to his/her needs. In fact, the application of this double principle of equity requires us to define equality between people and equality of treatment. People are considered as equals if they are in the same situation or have the same characteristics. Applied to family policy, characteristics such as matrimonial status, the number of children, employment status and the level of income are decisive to judge of inequality (eligibility conditions for family benefits are usually based on these characteristics). Equality of treatment seems a trivial problem but is subject to controversies because it implies to judge of inequality as well as equality of treatment. Applied to family policy, this is the problem of the amount of benefit for each child : do we have to consider that each child has the same right and allow the same amount of benefit to each child, or do we have to consider that the cost of children vary with the birth rank and the income level of parents, and then allow an amount of benefit varying with the cost of children or characteristics of the family (income related benefits) ?

This analysis of the concept of neutrality applied to family policy as part of redistribution does not conclude with a proper definition of neutrality or equity but shows the ambiguities of the notion insofar as these definitions can lead to contradictory systems of benefits : equal benefits, benefits increasing with cost of children or in favour of the least well-off. The choice between one of these definitions results from an ideological judgement on aims of intervention of government.

2. Monetary allowances of family policies and measurement of the redistributive effects.

The distinction between horizontal and vertical dimensions is taken into account in the analysis of equity as well as redistribution. Where horizontal equity requires equal treatment of equals (families with the same characteristics), horizontal redistribution analyses differences of treatment between unequals (families belonging to a group of people with a particular characteristic such as a certain number of children, whatever their income level). Where vertical equity requires unequal treatment of unequals, vertical redistribution analyses differences of treatment between unequals (families are only characterized by their level of income).

As far as methodology is concerned, our approach was pragmatic and inevitably, partly arbitrary. In fact, we selected a set of *specific redistributive dimensions* which, we thought, could enable a kind of consensus concerning the objectives, in the field of family policies, which have to be evaluated. Therefore, we adopted an analysis plan which consisted in studying the following redistributive effects :

- **vertical** redistributive effect, i.e. along with the households monetary standard of living, family benefits excluded,
- **horizontal** redistributive effects :
* along with the number of children ;
* along with the age of children ;
* along with the schooling level of the children ;
* depending on whether the child suffers from a handicap or not ;
* along with the number of parents (loneparenthood) ;
* along with the parents activity status.

Between the lines of these different dimensions, one can find objectives of family policy which are commonly admitted : birth aid, aid to young childhood, compensation of the child cost, aid to single-parent families, reduction in the standard of living inequalities, aid to conciliate professional and family lives.

However it is not easy to compare national provisions in the field of family benefits. It is possible to have several approaches. First of all, it is common to use *global statistics*, issued by the organisations which manage the family policy, to compare the budgetary amounts engaged by each country in this sector of social protection as well as to evaluate which part of the population benefits from these provisions. In addition to the difficulties of comparison between countries, these kinds of statistics do not enable fine analysis, especially evaluative analysis of horizontal and vertical redistributive effects. Another point of view consists in *carefully analysing the different regulations* in order to shed a light on the resemblance between countries through systematic analyse of certain topics. One of the most meaningful method consists in expressing the benefits scale in a common monetary unit. However the approach has two important limitations : the comparative reading of the scale does not enable us to easily take into account the particularities of eligibility, unless multiplying them to infinity in order to express each possible particular case ; the second limit is that it is not possible to express easily the scales which cumulate different allowances. It is possible to erase this second difficulty by using an *analysis by family-types*. This exercise consists in calculating and adding the different allowances to which the different fictitious families, characterised by several parameters (number and age of children, income level, parent(s) activity status, for example), are entitled to. There also, the approach has some limits, as choosing several family-types is reductive ; one does not find all the diversity of real family situations. To take into account this diversity, it is necessary to refer to survey data. With available data from a survey which is representative of the national population, one can carry out two types of studies. The first one consists in systematising the method of family-types by applying the calculation of the different allowances to several thousands of families

contained in the survey sample ; one then faces the elaboration of a fastidious *micro-simulation*. The second way is more classical and does not calculate family allowances, but retains the allowance amounts as declared by the surveyed persons ; in this case, one accepts a degree of approximation linked to the always possible declaration errors. The research report of ADEPS treats the subject successively along with these five methodologies, but in this paper we will take only the results obtained from the last approach, i.e. on the basis of *exploitation of the data declared in the different national surveys* of the Panel Comparability Project (PACO) [7].

3. Redistributive effects of family allowances in Germany, Belgium, France, Great Britain and Luxembourg.

Before approaching the study of the different redistributive dimensions, it is necessary to note what survey data globally point to regarding the average level of *generosity* of family benefits [8] in the five countries studied. As indicated in table 1, in absolute values, Luxembourg is on average the most generous from the viewpoint of family benefits (287 FF per unit of consumption and per month [9]). However in relative values, Luxembourg family benefits represent on average only 2.4% of the available household income (these are averages calculated on the whole of households, whether they are getting benefits or not) versus 3.7% in Belgium, 3.2% in France and, 2.6% in Great Britain.

Table 1 : Monthly family benefits per unit of consumption (UC), in French francs, and
relative importance in the total household income

	Germany	Belgium	France	Great Britain	Luxembourg
Family benefits	102 FF	273 FF	224 FF	108 FF	287 FF

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[7] The socio-economic panel "Liewen zu Letzebuerg" (PSELL) for Luxembourg, the Lorraine socio-economic household survey (ESEML) for France, the Socio-Oekonomisches Panel (SOEP) for Germany, the survey "Les conditions de vie des ménages en Belgique" for Belgium and le British Household Panel Study (BHPS) for Great Britain. Except Belgium, the data come from the PACO base (Panel Comparability Project) managed by CEPS/INSTEAD at Luxembourg.

[8] In this study, the family benefits include not only the Child Benefits but also the other transfers from the family policy (the orphan's benefits, for example) and transfers indirectly in relation with the family policy (the maternity leave daily allowances, the school maintenance allowances, etc.). However the level of precision differs from one national survey to an other, and then it is not possible to assure the same level of exhaustiveness between the different countries studied.

[9] The incomes are calculated in equivalent values following the purchasing power parities published by Eurostat (in French francs, May 1992). We use standardised incomes (standard of living) : the incomes are divided by the number of consumption units to take into account the differences of situation between households along with the number of persons in the household. A scale proposed recently by the French Institute of Statistics (INSEE) has been retained to calculate this number of units ; this scale consists in attributing one unit for the first adult of the household and 0.35 units for the other individuals of the household.
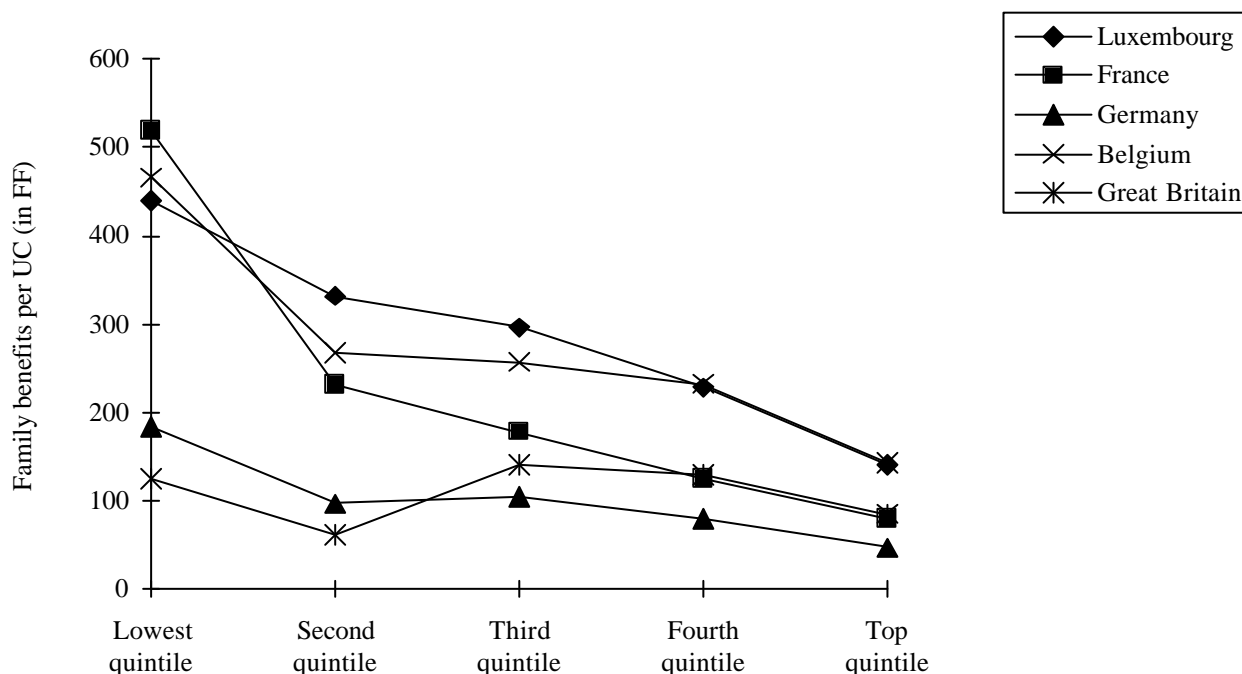
Family benefits in % of the total household income	1,1%	3,7%	3,2%	2,6%	2,4%

A. The vertical redistribution.

The analysis of vertical redistribution consists in studying how social transfers (in this case family benefits) contribute to reducing standard of living inequalities between households. To tackle this question, we have used two indicators ; on the one hand, the average amount of family benefits per consumption unit along with the quintile of standard of living (family benefits excluded) [10] and, on the other hand, the Gini index.

As is shown in graph 1, France is the country where vertical redistribution is the largest. In the five countries, the amount of family benefits decreases when the standard of living increases, but this decrease is more significant in France, particularly between the first and the second quintile. At this stage of the analysis, it would be wrong to draw any conclusions, as what seems to be the effect of a vertical redistribution of the standard of living may be the effect of a horizontal redistribution if, for example, families with children are rather concentrated in the lowest decile.

Graph 1 : Monthly family benefits per unit of consumption (UC) by quintiles of total household equivalent income whithout family benefits

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[10] The standard of living is equal to the total of monetary incomes - family benefits excluded - minus household income taxes, divided by the number of consumption units. In the cases of Great Britain and Germany, we are not sure that, in the PACO data base, this total income is actually disposable (taxes and social contributions excluded).

With Gini indexes (cf. chart 2), one finds a quite similar conclusion : in France, the indicators of inequality decrease most when family benefits are taken into account. The Gini coefficient of the standard of living in France decreases from 27.6 to 25.8 when family benefits are included (i.e. a decrease of inequality by 1.8 points versus 1.5 points in Belgium, 1.0 point in Luxembourg and only 0.5 point in Germany and Great Britain). However, differences between France, Belgium and Luxembourg are small and therefore this comparative result must be relativised.

Table 2 : Gini coefficients calculated on the disposable income per unit of consumption
with family benefits included or excluded

|	Germany	Belgium	France	Great Britain	Luxembourg
Without family benefits	33,9%	25,3%	27,6%	45,3%	26,2%
Family benefits included	33,4%	23,8%	25,8%	44,8%	25,2%

B. The different dimensions of horizontal distribution.

Let us consider successively the different horizontal redistributive dimensions by comparing the average amounts of family benefits per consumption unit for different types of families.

Graph 2 illustrates the main objective of family policies, which is the redistribution of social transfers in favour of households with child(ren) [11]. Next it shows that the different countries take into account, in their family transfers policy, the increasing costs associated to the *number of dependent children* : when the number of children is higher, the total amount of benefits is also higher. Finally, one can notice that, except in Great Britain, in the different countries (for Germany, the remark is less obvious), the relation between the number of children and the amount of family benefits is not linear : the gain of benefits is much more higher when the number of children increases from two to three or more, than from one to two (this premium for families of more than two children is most significant in France). The effect is a little exaggerated here by the fact that we could not separate the families along with more than three children, by lack of sufficient sample size in the five surveys. However, our conclusion is not based on an artefact because the amounts of benefits analysed here are standardised by a number of consumption units which enables us to consider the households as if they had the same size.

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[11] Some households without children receive family benefits ; it is not an error : for example, when a mother expects her first child, she eventualy receives maternity leave allowances.

Graph 2 : Monthly family benefits per unit of consumption (UC)
by number of children (less than 21 years old)
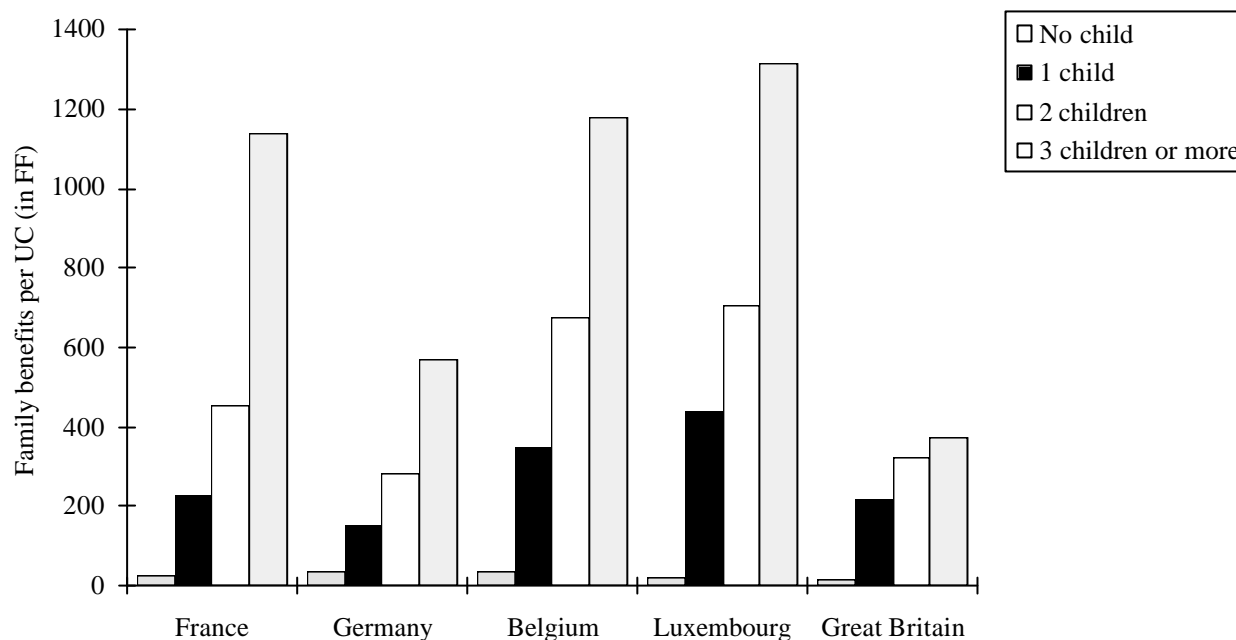
One may then wonder whether the different family policies take more finely into account certain specific costs : cost linked to the *age of children* (cf. graph 3), to their *schooling level* (cf. graph 4) or their *health* (cf. graph 5 limited to France and Luxembourg in the absence of appropriate data in the surveys of the three other countries).

However, to comment upon graphs 3 and 4 is quite difficult because, when considering the household level (or family level), one should detail specific combinations which the size of the samples does not allow. To be precise, one should be able to distinguish all the possible configurations of families according to the age class (or according to the level of education) of each of the children of the family. In fact, we have simplified the approach by characterising the households according to the presence of *at least one child* of such age class or such education level, or not. This simplification makes the results interpretation partly difficult because then the different categories are not exclusive (one family may be classified both in the category "presence of at least one child aged from 0 to 2 years" and in the category "presence of at least one child aged from 3 to 11 years"). Consequently, if we observe, for example, a particularly high amount of family benefits for families having at least one child at primary school, one cannot directly interpret this particularity as being the fact of a policy aiming at compensating the cost of primary schooling because, precisely, some of those families have other children at another education level. Then, the particularity may be explained more by an addition of benefits when children are at school at different levels rather than by the fact that one of the children is at primary school.

This methodological remark made, if we disregard the fact that it is not possible to take into account all the characteristics of the children, several results of this international comparison can be expressed. In graph 3, one can read that, from the viewpoint of aid to young children (children up to 3 years old), Luxembourg policy resembles the French one (and, to a lesser extent, the German one). In these two countries, specific allowances are made until the child becomes three years : firsly the
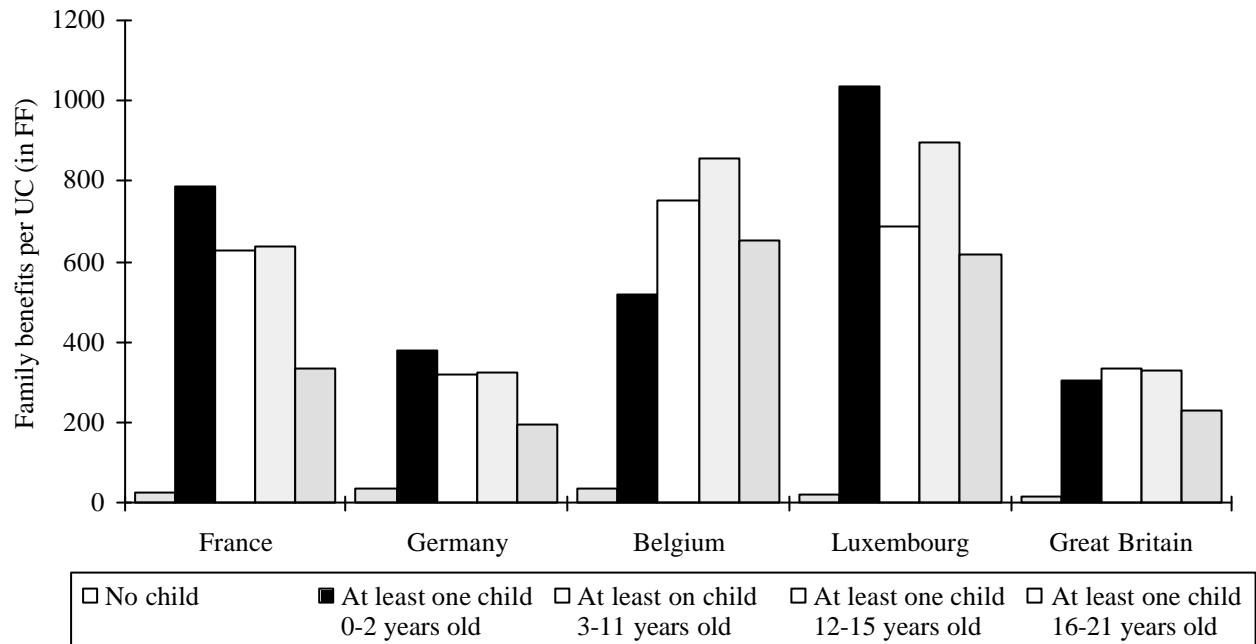
Luxembourg birth allowances and the French *Allocation Pour Jeune Enfant* (Young Child Allowance) which are universal in both countries with almost equivalent amounts and, secondly, the Luxembourg *Allocation d'Education* which is less generous than the French *Allocation Parentale d'Education* but which, on the contrary, is granted more widely than in France [12]. For the intermediary age categories, Luxembourg is more similar to Belgium. In these two countries, it seems that family policy is a little more favourable to families having at least one child between 12 to 15 years : this result very probably illustrates the effect due to increases along with the age associated to the *Allocations Familiales* (Child benefits). Finally, in all countries, especially in France, the presence of one child over 16 years old is correlated to an average amount of family benefits which is quite low ; this shows the effect of the age limit beyond which Child Benefits are no longer paid (18 years in Luxembourg, 16 years in the four other countries, but the limit may be delayed, when the child continues to be dependent from his parents - with certain conditions -, to 27 years in Germany and Luxembourg, to 25 years in Belgium, to 20 years in France and to 18 years for Great Britain).

To first appearances, the results illustrated in graph 4 seem contradictory to those previously described, as one does not find the effect of aid to young children in the household category where no child is at school. In fact, this is due to the fact that, to the families having very young children not yet at school, are added families having only older children who have finished school and therefore are not eligible for Child Benefits. In three out of the four countries [13], the redistribution really exists in favour of families having children at school : in Belgium, the difference of average amount of family benefits wether or not children receive education at school is very obvious ; in Luxembourg and in France, differences are less significant, but in Germany one can see a slight anti-redistribution.

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[12] The absence of targetting effect toward young children in Belgium is likely due, at least in part, to the fact that, in the survey, social benefits in case of professional break are not taken into account in family benefits. These benefits in case of professional activity break are partly justified by the birth of a child insofar as they can also claimed for other reasons.

[13] The information is not available in the British data file.

Graph 3 : Monthly family benefits per unit of consumption (UC)
by age of the children

| | No child | At least one child 0-2 years old | At least on child 3-11 years old | At least one child 12-15 years old | At least one child 16-21 years old |

Graph 4 : Monthly family benefits per unit of consumption (UC)
by level of schooling

No child

No child at school

At least one child at first level school (first and second for Germany)

At least one child at second level school

At least one child at third level education (university)
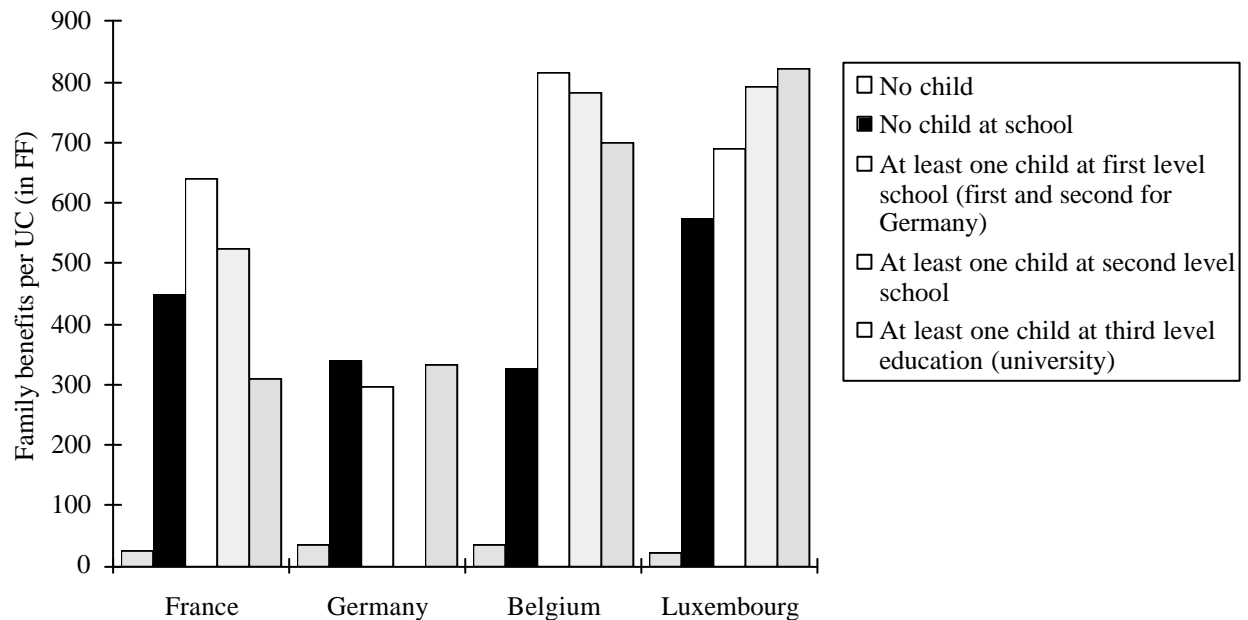
Taking into account children with handicaps indicates a clear redistributive dimension of the family policy in Luxembourg as well as in France. This redistributive dimension is more significant in France but our international comparison is quite questionable as it only takes into account monetary benefits available to families having handicapped children and not the in kind transfers (services) which are the main type of aid to which these families are also eligible.

Graph 5 : Monthly family benefits per unit of consumption (UC) by presence of handicaped children
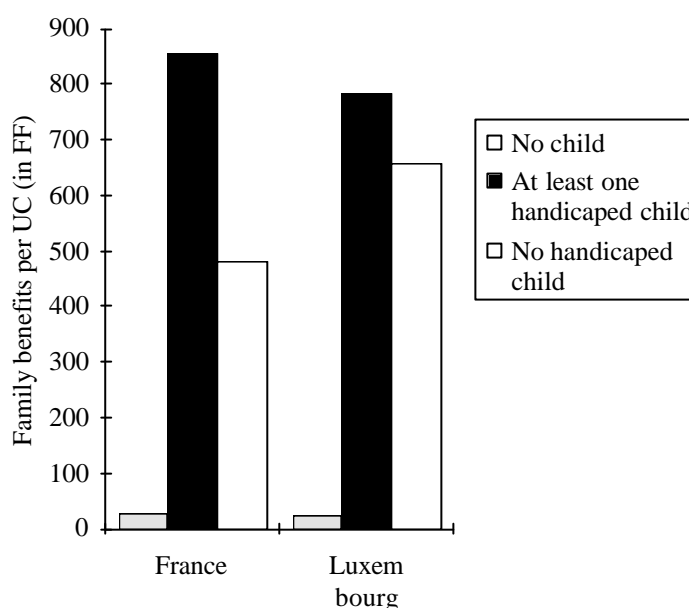

If one takes into consideration the *parents status*, one must first study the redistributive dimension in favour of single-parent families. The results gathered in graph 6 are quite astonishing. Whereas the family policy in Belgium and Luxembourg does not specifically favour lone parents (there are *Allocations Familiales* increases for orphans, but no transfer equivalent to the French *Allocation de Parent Isolé*), these parents receive benefits which are on average higher than those of two-parents families. On the contrary, one does not see a notable effect of the *Unterhaltsvorshuss* in favour of German lone parents. In the first case, the effect attributed to the situation of single-parent is very likely the result of another redistributive dimension and in particular the vertical redistribution (one-parent families seem to receive higher family benefits not only because of their status, but rather because of their low resources). In the second case, the absence of clear redistribution in favour of German single-parent families may be explained by the fact of the low amounts of the *Unterhaltsvorshuss* (it is more an increase of the *Kindergeld* for a child educated by only one parent than a real income of replacement as in the case of the French *Allocation de Parent Isolé*) and/or by the uncertainty that, in the German survey, this specific allowance has been collected with the Child Benefits.

Graph 6 : Monthly family benefits per unit of consumption (UC)
by marital status of head of household
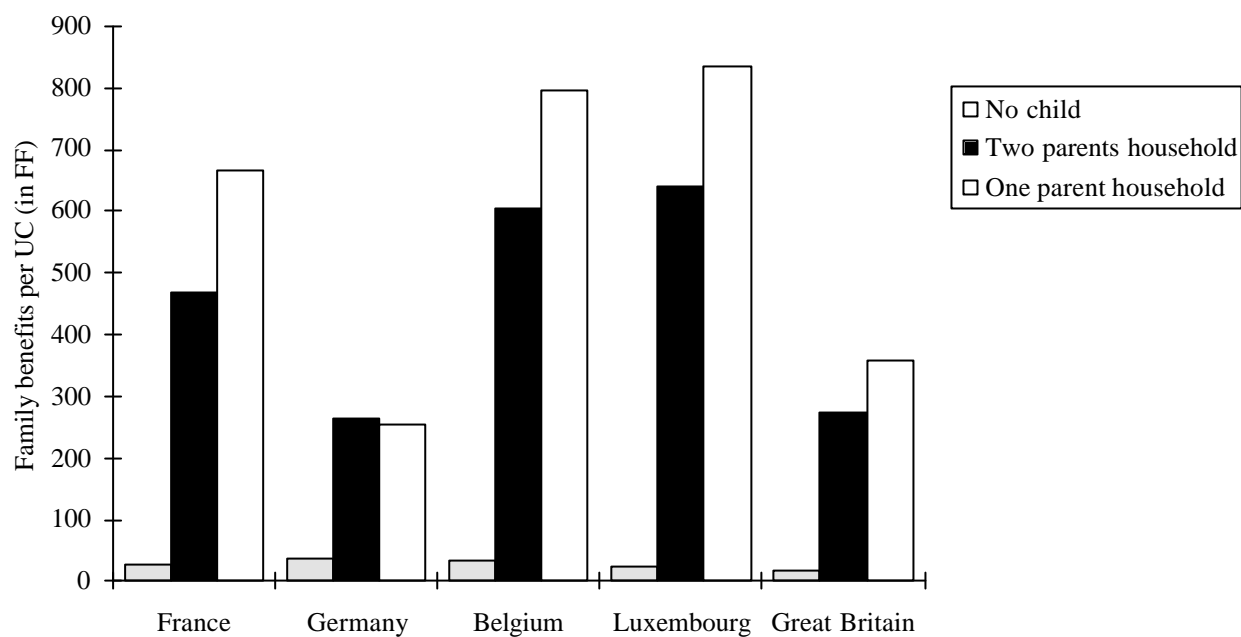
The analysis of the redistribution according to the marital status must be completed taking into account the *parents employment situation*. In this area, differences between national family policies appear quite clearly in graph 7.

Graph 7 : Monthly family benefits per unit of consumption (UC)
by employment status of the parents
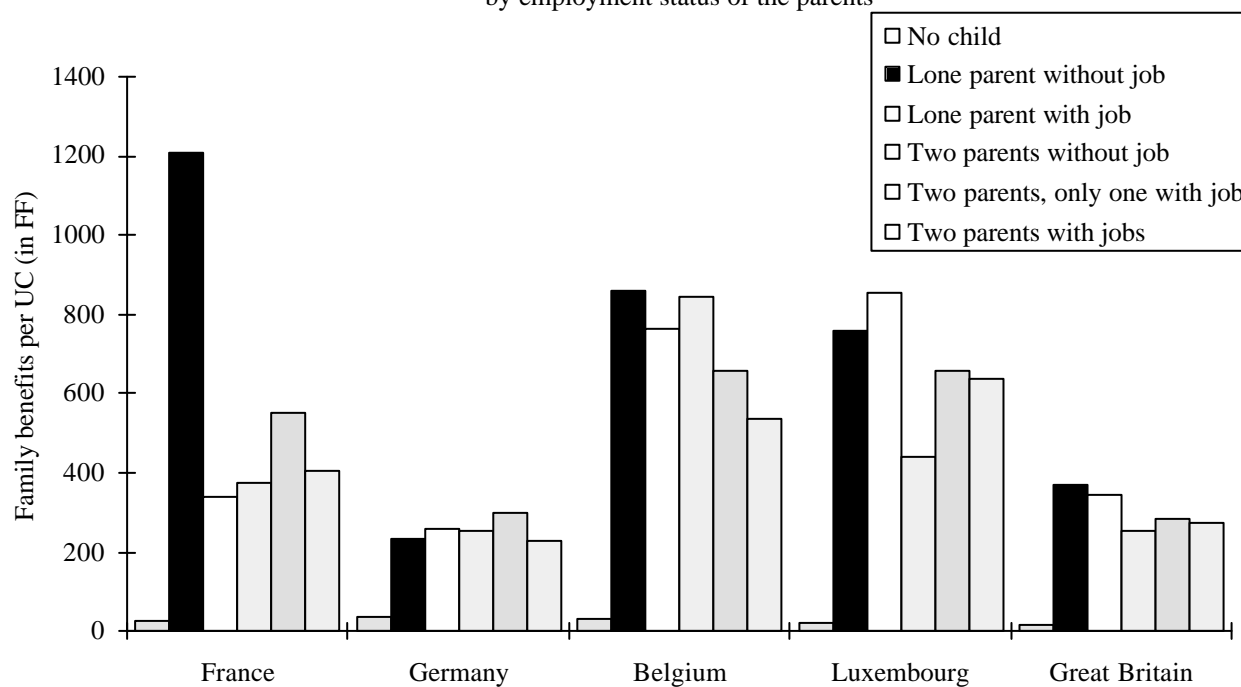
France has a generous policy in favour of single-parent households when the head of the household is unemployed ; it is probably the effect of the means-tested condition of the Allocation de Parent Isolé or of the Revenu Minimum d'Insertion. However this generosity in favour of unemployed parents is not extended to French parents who live in couples. Belgium grants higher amounts of family benefits when parents are unemployed ; one guesses that this is an effect of vertical redistribution. However, contrarily to France, Belgium is not much more generous towards one-parent households than towards two-parent households. Contrarily to the other countries, Luxembourg tends to privilege employed parents. In Great Britain, one does not note difference according to the parent employment status ; the main difference contrasts the families according only to the marital status. Finally, in Germany, employment and marital status do not seem to constitute horizontal redistribution dimensions in the attribution of family benefits.

C. Simultaneous analysis of vertical and horizontal redistributive dimensions.

As stated before, the descriptive analysis does not always enable us to measure correctly the different redistributive effects as they are not totally independent. The use of a regression technique enables us to partly avoid this inconvenience. It particularly allows us to measure the specific redistributive effects at a given standard of living or at a given number of children. However, the method has certain limits and in particular it was not possible to have a simultaneous approach of, for example, the measure of the redistributive effect according to the number of children and according to the level of schooling of children, due to a too strong multicollinearity. In spite of these limits, the analysis give quite interesting results.

One can first determine (cf. chart 3) that in the five countries there is, all other things being equal, an effect of vertical redistribution which is statistically significant. Regression coefficients [14] associated to the variable of monetary standard of living, family benefits being excluded, confirm the hierarchy between the countries which we had deduced from the calculation of Gini coefficients : France would be the most redistributive country, followed by Belgium and Luxembourg, then Germany and finally Great Britain.

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[14] These coefficient may be read here in terms of elasticity.

Table 3 : Estimation coefficients, calculated by OLS, of the different effects of redistribution due to the family benefits in Germany, Belgium, France, Great Britain and Luxembourg.

Dependent variable : Ln (family benefits / UC + 10)	GERMANY N = 3889	BELGIUM N = 3605	FRANCE N = 2174	GREAT BRITAIN N = 5051	LUXEMBOURG N = 1949
Independent variables :	B coefficient β coefficient Significativity	B coefficient β coefficient Significativity	B coefficient β coefficient Significativity	B coefficient β coefficient Significativity	B coefficient β coefficient Significativity
Ln (total income per UC without family benefits + 10 FF)	- 0.14 - 0.08 ***	- 0.20 - 0.05 ***	- 0.52 - 0.18 ***	- 0.05 - 0.03 **	- 0.21 - 0.05 ***
One child	1.82 0.42 ***	2.97 0.56 ***	1.20 0.25 ***	2.38 0.48 ***	2.80 0.54 ***
Two children	2.67 0.54 ***	3.85 0.68 ***	3.18 0.59 ***	3.18 0.69 ***	3.64 0.68 ***
Three children	3.29 0.40 ***	4.32 0.49 ***	4.12 0.52 ***	3.34 0.46 ***	4.23 0.40 ***
Four children	3.53 0.19 ***	4.56 0.27 ***	4.12 0.27 ***	3.44 0.24 ***	4.44 0.26 ***
Five children or more	3.86 0.12 ***	4.79 0.16 ***	4.12 0.18 ***	3.22 0.11 ***	/ / /
Presence of at least one grand-child	- 0.01 - 0.00 ns	- 1.04 - 0.04 ***	0.71 0.04 **	- 0.45 - 0.03 ***	0.18 0.01 ns
Wage earner head	0.16 0.05 **	0.25 0.06 ***	0.31 0.08 ***	0.15 0.05 ***	- 0.03 - 0.01 ns
Unemployed head	0.08 0.01 ns	0.19 0.02 *	0.30 0.03 ns	0.13 0.02 *	- 0.23 - 0.01 ns
Inactive head	- 0.21 - 0.07 **	0.09 0.02 ns	0.05 0.01 ns	0.09 0.03 ns	- 0.38 - 0.09 ***
Single head	- 0.58 - 0.14 ***	- 0.20 - 0.03 ***	0.47 0.08 ***	0.16 0.04 **	- 0.22 - 0.04 *
Widowed head	- 0.33 - 0.08 ***	- 0.11 - 0.02 ns	0.42 0.08 ***	- 0.07 - 0.02 ns	0.21 0.02 ns
Divorced/separated head	- 0.31 - 0.06 ***	0.16 0.02 *	- 0.06 - 0.01 ns	0.03 0.01 ns	0.16 0.02 ns
Lone parent	0.28 0.09 ***	0,00 0,00 ns	- 0.44 - 0.10 ***	0.01 0.00 ns	- 0.11 - 0.02 ns
Presence of at least one handicaped child	/ / /	/ / /	0.74 0.03 *	/ / /	0.13 0.00 ns
Constant	3.87 ***	4.10 ***	6.85 ***	2.66 ***	4.76 ***
Degree of adequation	ajusted R² : 67%	ajusted R² : 86%	ajusted R² : 70%	ajusted R² : 76%	ajusted R² : 83%

B : non-standardised coefficient. **b** : standardised coefficient. **Ln** : neperian logarithm. **UC** : unit of consumption
Significativity : *** (0,1%) ; ** (1%) ; * (5%) ; ns (non significative at 5% level).

From the viewpoint of redistribution according to the number of children aged less than 21 years, the effect is also very clear in the five countries. The normalisation of the coefficient with respect to the case of families with two children (that is to say the division of all the coefficients by the coefficient in the case of a family with two children), allows us to compare the progressiveness of the redistributive effect in the five countries (cf. table 4). In Germany, this effect is the most progressive ; Belgium and Luxembourg have an intermediary position and, in Great Britain, the redistributive effects are close when there is more than one child. The case of France is a slightly particular as the French family policy originality is, on one hand, to grant no Child Benefit to families with only one child and, on the other hand, to increase strongly the Child Benefits for families with three children. Also, for a given number of children, France is the only country where the presence of grand-children (therefore of a sub-family) grants a significant supplement of family benefits ; in Belgium and Great Britain, on the contrary, the effect is negative.

Table 4 : Indicators of progressiveness of the family benefits per unit of consumption, along with the number of children aged under 21

	Germany	Belgium	France	Great Britain	Luxembourg
One child	0.68	0.77	0.37	0.75	0.77
Two children	1	1	1	1	1
Three children	1.23	1.12	1.29	1.05	1.16
Four children	1.32	1.18	1.29	1.08	1.22
Five children or more	1.45	1.24	1.29	1.02	/

From the viewpoint of the activity status of the head of the household, redistributive effects are less easily observed (the coefficients associated to the explicative variables are often statistically non-significant) : in Belgium, in France and in Great Britain, family benefits would be bigger for households with a wage earner head (by opposition to households with an independent worker head) ; in Luxembourg, the family allowance policy would be, all things equal, quite unfavourable to inactive head of households and the German family policy would combine these two effects (positive effect in favour of wage earner people with job and negative effect in favour of inactive people). However, to carry out an accurate analysis, it should be necessary to take into account the activity status of the wife/husband of the head of the household ; that was not possible because of a strong multicollinearity with the variable of marital status.

Regarding the redistributive effect in favour of single-parent families, it is difficult to analyse it from the results shown in table 3. According to this table, the effect would be very significant in Germany (the only country for which our descriptive analysis stated the absence of difference in the amount of family benefit according to the marital status of families with children) and there would also be an anti-redistributive effect in France. In fact, this interpretation is not adapted because the analysis concerns the population in the whole : the effect attributed to loneparenthood is therefore due more to the situation of lonely persons without children than to the situation of single-parent families. That is why we have extended our study by limiting the analysis to the only population constituted by households having at least one child aged under 21 years (cf. table 5).

Table 5 : Estimation coefficients, calculated by OLS, of the different effects of redistribution due to the family benefits in Germany, Belgium, France, Great Britain and Luxembourg
(sample limited to the households with at least one child under 21 years old).

Dependent variable : Ln (family benefits / UC + 10)	**GERMANY** **N = 1166**	**BELGIUM** **N = 1528**	**FRANCE** **N = 947**	**GREAT BRITAIN** **N = 1669**	**LUXEMBOURG** **N = 814**
Independent variables :	B coefficient β coefficient Significativity	B coefficient β coefficient Significativity	B coefficient β coefficient Significativity	B coefficient β coefficient Significativity	B coefficient β coefficient Significativity
Ln (total income per UC without family benefits + 10 FF)	- 0.11 - 0.10 ***	- 0.26 - 0.14 ***	- 0.45 - 0.16 ***	- 0.08 - 0.07 **	- 0.16 - 0.06 ns
Age of the youngest child	- 0.05 - 0.28 ***	0.01 0.06 **	- 0.10 - 0.34 ***	- 0.76 - 0.03 ns	- 0.06 - 0.23 ***
Two children	0.73 0.30 ***	0.93 0.46 ***	1.83 0.44 ***	0.83 0.33 ***	0.73 0.31 ***
Three children	1.23 0.35 ***	1.42 0.50 ***	2.61 0.47 ***	0.95 0.28 ***	1.25 0.31 ***
Four children	1.41 0.18 ***	1.64 0.32 ***	2.46 0.24 ***	1.05 0.17 ***	1.44 0.22 ***
Five children or more	1.72 0.13 ***	1.83 0.22 ***	2.36 0.15 ***	0.96 0.07 **	/ / /
Presence of at least one grand-child	- 0.60 - 0.08 **	- 1.50 - 0.16 ***	0.35 0.02 ns	- 0.34 - 0.04 ns	- 0.25 - 0.04 ns
Wage earner head	0.15 0.05 ns	0.38 0.18 ***	0.32 0.07 *	0.31 0.12 ***	- 0.04 - 0.01 ns
Unemployed head	- 0.08 - 0.01 ns	0.32 0.07 **	0.18 0.01 ns	0.34 0.07 *	- 0.36 - 0.01 ns
Inactive head	0.02 0.00 ns	0.48 0.13 ***	0.33 0.05 ns	0.37 0.12 ***	- 0.78 - 0.18 ***
Single head	- 0.59 - 0.06 *	0.02 0.00 ns	0.37 0.05 *	0.49 0.11 ***	- 0.07 - 0.01 ns
Widowed head	0.18 0.02 ns	0.13 0.02 ns	0.82 0.07 *	- 0.67 - 0.08 **	0.73 0.11 **
Divorced/separated head	- 0.12 - 0.27 ns	- 0.05 - 0.01 ns	- 0.76 - 0.10 ***	- 0.02 - 0.17 ns	0.38 0.08 ns
Lone parent	0.08 0.03 ns	0.65 0.11 **	0.47 0.07 ns	0.05 0.02 ns	0.03 0.01 ns
Presence of at least one handicaped child	/ / /	/ / /	0.72 0.04 *	/ / /	0.36 0.04 ns
Constant	6.02 ***	7.37 ***	8.40 ***	5.12 ***	7,54 ***
Degree of adequation	ajusted R^2 : 38%	ajusted R^2 : 46%	ajusted R^2 : 61%	ajusted R^2 : 16%	ajusted R^2 : 35%

B : non-standardised coefficient. **b** : standardised coefficient. **Ln** : neperien logarithm. **UC** : unit of consumption .
Significativity : *** (0,1%) ; ** (1%) ; * (5%) ; ns (non-significative at 5% level).

In this second approach of the simultaneous analysis of the redistributive effects, several of the former conclusions are made. The vertical redistributive effect is significant in the different countries (except in Luxembourg where the vertical redistribution would be due to a redistribution from households without children toward households with children rather than between households with children). The redistribution effect according to the number of children is quite clear for the five countries. In Belgium, one finds a positive effect in favour of households without a self-employed worker head, effect which illustrates well the Belgium Social Security system where family allowances of the self-employed worker system are less favourable and where allowances for unemployed or inactive people are increased. One also finds again the rather unfavourable treatment of Luxembourg inactive household heads, from the family benefits point of view.

However, in this second approach, we were able to introduce an explicative factor to measure the effect of redistribution in favour of small childhood : the age of the youngest child. It is quite interesting to state that in three countries the expected negative effect is observed (Germany, France and Luxembourg). But the English family policy would not show, *ceteris paribus,* any effect of help to small childhood and, in Belgium, an anti-redistributive effect would be observed. In case of Belgium, one may explain this result by the absence of education allowance (paid to mothers who stop work after a birth), comparatively to what exists in the three countries where the negative effect is observed [15].

Finally, except Belgium, no country is showing a particularly generous family benefits policy in favour of single-parent families. In countries where an allowance for single-parent exists (France, Great Britain, Germany), the redistributive effect attributed to the fact that this allowance is means-tested is probably already taken into account in the explicative variable of vertical redistribution. In case of Belgium, the positive effect observed is very likely due to the Child Benefits for orphans which, on the contrary, are not subject to an income condition. But independently from the status of single-parent, one will also notice that the Luxembourg family policy grants, *ceteris paribus*, a supplement of allowances to widowed parents, that in Great Britain single parents are advantaged (and widows disadvantaged), that in France the family policy would be rather unfavourable to divorced/separated parents and that in Belgium and in Germany, the amount of family benefits would be indifferent to the marriage status of parents.

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[15] This result can at least be attributed to the absence of benefit of this kind known as a family policy benefit, because there is a benefit for people leaving their professional activity in Belgium : people leaving their professional activity because of the birth of a child as well as for other reasons are entitled to this benefit so that this benefit is considered as connected to employment policy rather to family policy.

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