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INCOME DISTRIBUTION AND ECONOMIC WELL-BEING WITHIN EUROPEAN FAMILIES

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The article analyses the distribution of income within European families and the consequences for the spouses' economic well-being. Thus, many studies have shown that women nowadays participate on the labour market in an increasing number resulting in a more equal distribution of income within the family. However, it is still an open ended question, if this means an equal distribution of economic well-being within the family. The paper exercises data from the European Community Household Panel and covers the situation in most of the European Community countries. In most countries husbands economic well-being declines and wives raises the more she earns relatively to him. However, the relationships are often of an inversed u-shaped form for both sexes with men getting the highest well-being at an earlier stage than women. Within the Scandinavian welfare state regime this preferred distribution is closer to the actual income distribution than in the Continental European and Liberal regimes, and in the Southern European regime the preferences are far away from being achieved. In The Netherlands and in Ireland the preferences are for a traditional bread-winner model, as there is found a u-shaped relationship between the distribution of income and men and women's economic well-being.

Introduction

During the last decades a trend towards a more equalitarian division of income within families has appeared in most advanced countries, however, there is still a great deviance in income shares among spouses with the Nordic countries being the more equalitarian followed by the Continental European countries, and the Southern European as the less equalitarian with Ireland as an extreme outlier. The important question is if this variation in intra-family income distributions has an impact on the distribution of output within the family and/or it affects the well-being of the individual family member.

As there are no reliable data on the distribution of output within the family the article focuses only on the relationship between the income-distribution within the family and the individual economic well-being[1]. Furthermore, the discrepancy between the preferred income-distribution and the actual one is examined for the European Union Countries. The assumption is that neither men nor women are in an optimal situation, because their preferences and aspirations might not be fulfilled due to different preference-structures and bargaining powers among women and men. Thus, the preferred income-share[2] is properly higher for the wife and lower for the husband, than the actual income-share in the household. However, it is expected that the "optimum"-point falls not far away from the actual point of sharing, as larger distances could imply that the one or the others spouse's dissatisfaction became a threat to the solidarity ending up with a divorce.

This paper includes three sections. In the first section, an overview of the literature on the

1 Economic well-being is used concurrently to economic satisfaction, and refers to a domain satisfaction and not to overall satisfaction/well-being/happiness, see Easterlin (2004).
2 Income shares are used synonymous with income distribution, whereas income sharing refers to redistribution of

distribution of resources within families and about the relationship between the distribution and the economic well-being of spouses is given. In the second section, the methodology and data applied in this study are outlined, and the section includes also the specification of the empirical models to be tested. In the third section follows the results of the statistical analyses including tests of the different theses raised in the previous section. The analyses are divided into non-parametric analyses of the distribution of income and of well-being within couples, separately, and parametric analyses of the relationship between income-shares and well-being. Finally, it is investigated if there is any indication of an actual sharing of resources in the family controlling for economies of scale by formatting a marriage/cohabitation. The last section concludes.

Income Distribution and Well-being

In the last decades women in most European countries have entered the labour market to an extent, which has questioned the prevalence of the traditional family with the husband as the breadwinner and the wife as the housekeeper. That is, the aspiration of individuality and economic independency of the husband have encouraged women to improve their educational skills allowing them to get better positions on the labour market (Blossfeld and Drobnic, 2001; Cohen and Bianchi, 1999). The implicit assumption is that income earned by women are more to their own disposal and give more economic independency than income earned by the husband changing the power-balance and the distribution of consumption in favour of the wife (e.g. Bonke & Browning, 2006).

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income within the family.

However, in some countries the traditional distribution of income within the family is still widespread and even in countries with many double career families where the spouses supply the same amount of work to the labour market different wages partly due to discrimination may give different incomes among the spouses. If this means that the spouses have different standard of livings or that they get the same standard by sharing their incomes equally and the wife, thereby, becomes dependent on the income of the husband, who is usually the main earner, is a question to which there seems to be no definite answer.

Nonetheless, an increasing number of studies question that families are pooling their incomes and sharing them equally even in advanced societies. For UK Pahl (1989), for Sweden Nyman (1996) and for Denmark Bonke & Uldall-Poulsen (2005) find that different allocation regimes - whole wage system, allowance system, independent system - exist concurrently with the equal sharing regime, and, furthermore, Pahl (1989) argues that the family may have different allocation regimes during their life-stages. Furthermore, several studies find significant correlations between the distribution of income within the family and their expenditures on specific goods, such as clothing and food-wear, so that relatively more income earned by the woman increases her consumption relatively to his consumption (Thomas, 1990; Phipps & Burton, 1992; Browning et.al., 1994; Ruuskanen, 1997).

The income-distribution and the sharing of resources within families have been objects for different theories of which the human capital, the resource bargaining and the resource dependency models are the most frequently discussed. The human capital theory is based on a neo-classic approach assuming that the initial resources of the spouses are being used in a joint way to maximize the household's economic utility (Becker, 1981). The resource bargaining model, on the other hand, allows for conflicts between the spouses, and the power relationship thus becomes the determinant of how resources are distributed within the family (Blood and Wolf, 1960). Finally, the resource dependency model assumes that the distribution of income is a proxy for the sharing of the very same income, as this is how dependency comes around (Sørensen and Mc Lanahan, 1987).

From an economic point of view marriage might be the best choice for many women in the short run, as it increases their standard of living more than an extra labour supply to the market would do. That parallel to the money transfer goods and services - housework and personal care – (see Browning & Goertz, 2004) are been giving in exchange implying an opposite dependency does not meet the argument, as the value of household work is usually very low for which reason there are in fact competitive substitutes. This brings the spouse performing in the household - the wife - into a weak bargaining situation concerning the sharing of the other spouse's - the husband's – income. Hallerød (2005) even finds that a high personal income coincides with the ability to avoid housework.

If looking apart from the distribution of other resources than income an unequal income distribution might either imply different consumption levels or some transfers of income favouring the less earning spouse, which, on the other hand increases economic dependency of the very same person (Heimdal and Houseknecht, 2003, Hallerød, 2005). That is, if the wife is dependent on her husband's income the smaller influence she has over the spending of the household's aggregate money, and the more likely it becomes that she experiences less well-being than he does. For that reason a skew income distribution either implies consumption differentials or economic dependency between the spouses, accentuating the question of how income is redistributed in the family, i.e. income pooling and cooperate consumption, non-cooperation, etc. (see Chiappori 1992, Browning et.al., 1994; Lundberg & Pollak, 1996;

Browning and Lechene, 2001).

Moreover, different preferences for income equality with a husband in favour of a traditional male breadwinner role and the wife favouring equal opportunities (see Ellingsæter, 1999; Heimdal and Houseknecht, 2003) might imply that women are less economically satisfied than men, if there is an unequal distribution of income within the family. As the Southern European societies are more traditional male breadwinner societies than are the Scandinavian Countries with the Continental European and the Liberal countries to be found in between, and, furthermore, because fewer women in the first countries than in the second and the third countries participate on the labour market, this implies that the well-being differential between women and men are likely to become smaller in the Scandinavian countries than in the Continental and Liberal countries and smallest within the Southern countries (see Esping-Andersen, 1999, for the gendering of European welfare states).

The important question is the relationship between the distribution of income within the family and the spouse's economic well-being. The expectation is that if the dependency/income-distribution is high/skew the dependent/low income person is expected to be less satisfied with the financial situation than is the non-dependent/high income person. However, this does not necessarily hold for the whole hold range of distributions, as most men as well as women, and especially those in the advanced societies, i.e. the Scandinavian countries, do not wish to be the only income-earner and provider of the family or the dependent and provided for partner. Therefore, they agree upon some u-shaped relationship between income-sharing and economic well-being, where the women's relationship is assumed to reach a maximum at a higher wife's share of income than that of men.

Furthermore, there might be a discrepancy between the preferred income distribution yielding the highest economic satisfaction and the actual distribution. The assumption is that the preferred income distribution is higher for women than for men, with the actual distribution to be found somewhere in between. However, it is to be expected that the "optimum"-point falls not far away from the actual point of distribution, as larger distances could imply that the one or the others spouse's dissatisfaction became a threat to the solidarity ending up with a divorce, cf. Hirschman's (1970) loyalty, voice and exit model, and the threat point assumed within the so-called Nash bargain allocation models (Manser and Brown, 1980; McElroy, 1990). Again the distances between the actual and optimal points are expected to become bigger the more advanced societies under investigation.

Methodology

In the literature of distribution of income within families two different approached are to be found. The one simply calculates each spouse's contribution to the family's economic resources assuming that the relative shares are an indicator of the distribution of output/consumption between the spouses (Bonke & Browning, 2003). The other one assumes that the distribution of income within the family is a proxy for the power-relationship and, thus, shows the degree of dependency in the family (Bonke & Uldall-Poulsen, 2005). Although these approaches are different the question remains the same, how to measure women's and men's standard of living given the distribution of income within the family.

Here, we measure the income distribution within families as the proportion of the individual incomes earned by the woman, that is

$$ID = WI/(HI + WI),$$

where

HI = husband's proportion of the family income

WI = wife's proportion of the family income

which means that there is no joint income, such as capital transfers and public transfers given to the household, taken into consideration. The income distribution, thus, varies between 0 to 1 and 0.5 characterizing economically equalitarian households.

In comparison, Sørensen and McLanahan (1987) and Hobson (1990) used an alternative measure, which was defined as the gap between the wife's and husband's proportion of family income, also, assuming no joint income. This measure,

$$DEP = (HI - WI)/(HI + WI),$$

varies between +1 for couples with husbands earning the whole income and -1 for couples, where the wife is the only income-earner. 0 indicates that the spouses earn the same amount of income.

As can be seen, the two measures are interrelated, and the relationship can be written as

$$ID = (1-DEP)/2.$$

The concept of income is crucial to the perception of economic dependency, as not all income sources are conceived as having the same value. At first glance earned income seems to have equal values, however, income from overtime and second jobs are usually the reward for doing some extra for which reason it is often conceived as an individual income increasing the earners private consumption (Wilson, 1987). The same holds for child support, which in most countries is given to the mother, because this may be of greater benefit for the child(ren)'s consumption than if it was given to the father (Lundberg et al, 1997; Wolley, 2004). The implicit assumption being that the mother is more competent and responsible for taking care of the child(ren). Also the receiving of other governmental transfers may be biased. Unemployment benefits and other transfers offered as a compensation for lost income may, ceteris paribus, decrease the receiver's dependency rate relatively to a situation where such money was not received. If they, however, are conceived having a lower social value the dependency rate will underestimate the receiver's dependency of the income earner, or, the dependency on a spouse is exchanged for dependency on the state (Joshi et.al., 1995; Ellingsæter, 1999) carrying stigma and loss of self-esteem. Finally, some assets are not always owned jointly by husband and wife in which cases the dependency will also become underestimated, which will be clearly recognized the end of the day.

The level of the aggregated income corrected for cost-of-living, i.e. economies of scale is usually the measure of economic well-being applied by economists (see Atkinson, Rainwater & Smeeding, 1995, Burkhauser & Crews, 1997 and Wolf and Zacharias, 2003). However, subjective well-being is another way of dealing with this issue. That is, the spouses satisfaction with the economic situation as a measure of the consumption power within the family and/or the spouse's own command over economic resources given s/he's economic aspirations and norms. There is an increasing literature dealing with this satisfaction measure as a proxy for economic utility, see e.g. Frey and Stutzer (2002) and Bonke et al (2005a).

Data

The data employed is the European Community Household Panel (ECHP), which was established in the beginning of the '90s as a union wide data bank to monitor the development in the labour markets and in the different welfare systems constituting the European Community.

In the first wave, 1994, all European member states participated in the ECHP that is Belgium, Denmark, France, Great Britain, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal and Spain. The number of individual respondents was ca. 160.000, which was far the highest because of relatively high attrition during the surveys 8 years life time. Moreover, the reported economic satisfaction is found pretty stable over time for Denmark (not shown here) for which reason applying only the first wave of the ECHP-data make sense although controlling for unobserved heterogeneity is not possible. In most of the analyses here we use only individuals in couples with children below 18 years-old living at home or couples without children living at home. In the last analyses about sharing and economies of scale also singles are included. Furthermore, only nuclear families, where no other family members being grandparents or grandchildren or non-family members are present, are included in the sample under investigation. The effect might be an underestimation of women's dependency in countries, where inter-generational families are wide-spread and an extra care-burden are on women preventing them from earning an income on the labour market.

In the analyses here income include earnings from wages, unemployment benefit, survivor's pension, old-age pension, family related benefits, sickness benefits, scholarships & grants, income from capital and income from relatives, friends or others, all net of taxes. This means that the income is not only influenced by the labour market participation, also transfers from relatives and the state, i.e. the welfare-regime, play a role. The total family income, which is used as a controlling variable, includes besides the spouses' individual incomes, social assistance, housing benefits, rental income and other collective incomes. All incomes are lagged as they relate to the year 1993.

The ECHP does not include strict information on the power-relations in couples concerning income matters and consumer decisions, nor is there any information on the actual distribution of consumption. For that reason a question on satisfaction with the financial situation asked to all individuals is used in the following analyses to measure subjective, economic well-being.

The final sample includes 122.714 individuals in couples, which are fewer than in the above analyses due to missing information for some of the variables.

Hypotheses and Empirical Models

In the models under investigation the dependent variable is men's and women's satisfaction with the financial situation, as this information is assumed to reveal the spouses satisfaction with the distributional system as well as the distribution of output within the family. The satisfaction question used is categorical with 6 levels - not satisfied at all, ... ,fully satisfied - and we assume an ordered response structure. For this reason ordered probit-regressions are found to become the most appropriate specification for the empirical models used in the following, see also Bonke & Browning (2003) and Easterlin (2004).

As the explanatory variable the wife's share of the spouse's aggregated personal income - the income-share - is used. In most of the regression-analyses this variable enters also as a squared specification, because an inverted U-shaped relationship is expected due to the assumption that neither men nor women in modern societies wish to become only bread-winners, which is not to say that strict equal contributions are preferred. There might be differences in the preferred provider-models among the countries under consideration. Therefore, we expect that the inverse u-shaped relationship between satisfaction and the income-distribution is less marked in Continental Europe than in the Scandinavian Countries, and in the most traditional countries, i.e. the Liberal and Southern European Countries, even a u-shaped relationship - i.e. with a minimum value - might be found.

Thus, the hypotheses are:

1) Economic satisfaction increases with income until a certain point, where after it decreases in the Scandinavian countries
2) Economic satisfaction does not vary significantly with income in the Continental countries
3) Economic satisfaction decreases with income until a certain point, where after it increases in the liberal and Southern European Countries.

Moreover, it is hypothesized that:

1) the "optimum"-point falls not far away from the actual point of shares with a smaller distance for men than for women explained by a skew power distribution between the spouses, i.e. men are assumed to more powerful than women.
2) the distances between the "optimum"-points are bigger in the Scandinavian Countries than in the Southern European Countries with the Continental and

Liberal Countries in between.

The presence of a reverse effect, where higher satisfaction would increase women's income by working more hours, is controlled for by lagging the income, however, if this is sufficient is beyond the scope of this article to investigate.

The controlling variables include total income in the household, i.e. personal and collective income taken together, the number of children, the age and the education of the wife, the age-differential between the spouses and the difference in the spouse's educational background.

The total income in the household (in quartiles) is assumed to be positively correlated to financial satisfaction, because higher income makes it easier to make ends meet and dependency might be felt easier to deal with in rich families than in poor families, i.e. a poverty measure. However, there could be some inverse relationship, too, due to higher economic aspirations the higher is the income already achieved (Clark and Oswald, 1996, Frey and Stutzer, 2002, Senik, 2004), which might be the case for career-oriented persons. Nonetheless, the positive relationship is expected to overdo the negative relationship. As the total income in the data-set is measured in current currencies we control for the position in the national income-distribution.

Another controlling variable is the number of children below 18 years living in the household, i.e. 0, 1, 2 or 3+. That is, children are conceived as a constraint for women's labour supply and career (Joshi & Davis, 1992; Sundstrom & Stafford, 1996; Bonke et al, 2005b), which again yields income-losses and a deterioration of the family's financial situation, i.e. an equivalence scale correction. Even in generous welfare states, as the Scandinavians, where child care institutions are available for most children and heavily subsidised, mothers and fathers experience the working life - family life dilemma finding them-selves forced to work more hours at the labour market - earning more money - than they did, before they had children (Deding and Lausten, 2004). The consequences are that the income earned is either not sufficient to meet the demand for money in child-families or decreasing the financial satisfaction of women as well as of men.

The age of the spouses is included in the models to measure the occurrence of cohort effects concerning economic satisfaction. Although the number of children partly captures the same phenomenon - because different age-groups take all life-stages into consideration - the age of the wife - and the husband - increases the satisfaction due to already made investments in durables and houses, and the experience of less welfare in the past - a generational effect (Easterlin, 2004).

Also age-differentials – the husband's minus the wife's ages (<-4, -4-0, 1-4, 5+) - are assumed to have an effect on the spouses' reported financial satisfaction. That is, the older the husband is relatively to his wife the more he finds himself in a position as a bread-winner and the less she does, and, therefore, his economic satisfaction is supposed to overdo that of her. If, on the opposite, the wife is older than her husband, a dual-earner family is more likely, and, therefore, she is supposed to be the most satisfied with the financial situation (Bonke & Browning, 2003).

As total income and the income-distribution among the spouses are already included in the model, education functions as a proxy for cultural differences. Thus, the educational background of the person, measured as the years in formal education, is assumed to indicate, which social group of the society, the person belongs to, and thereby, the person's aspiration of what s/he properly is entitled to gain from the society given hers/his investment in human capital. If this means a positive or negative correlation with financial satisfaction is an empirical question, however, the correlation for women is expected to be more significant than that for men, because women's education is a newer phenomenon than is men's education. Only looking at formal education, and, thereby, excluding on-the-job training and different courses during ones career questions the linear form of the relationship, as older generations may have higher social positions than their educational background indicates.

Finally, the educational difference between the husband and the wife (2, 1, 0, -1, -2 years) is included to capture the distribution of cross-cultural families. If the differential, thus, is higher than what is usual the case, women are expected to become less satisfied and men more satisfied, because of old breadwinner norms are assumed more prevalent among "traditional" cross-cultural families than among other families. The consequence is that educational differences may increase the satisfaction differentials of the spouses. In the analyses education is a categorical variable with three levels - third-level, secondary level, less than second stage of secondary level - following the OECD-classification.

That individual characteristics are of importance for the transformation of income into well-being, i.e. heterogeneity, is confirmed by Clark et al (2005), who show that citizens within 12 European Countries can be divided into four different classes with different marginal effect of income on well-being, and that demographic and country patterns explain some of these partially due to variation in preferences for redistribution.

The models applied in the following have the following forms with S_{hci} denoting the satisfaction recorded for the husband in household i in country c and S_{wci} is the corresponding measure for the wife:

$$S_{hci} = Yhci\delta hc + Yhci^2\theta_{hc} + Xhci'\beta_{hc} + \varepsilon_{hci}$$

$$S_{wci} = Ywci\delta_{wc} + Ywci^2\theta_{wc} + Xwci'\beta_{wc} + \varepsilon_{wci}$$

where Y is the wife's personal income relative to the aggregated personal income of the household, i.e. the wife's and the husbands personal incomes taken together, X is a matrix of covariates and e is the error term. For both equations the same right hand side variables are included: the wife's share of personal income within the family the previous year, the same variable squared, the number of years of formal education, the husband's educational level minus the wife's, the age of the spouse, the age of the husband minus that of the wife, the number of children below 18 years living at home and the aggregated income in the family, i.e. the personal incomes and the joint income, also for the previous year.

The inclusion of regressions without the income share squared is due to the fact that plots show that this is more appropriate models for some countries.

Analyses

Distribution of income and well-being within couples

The income distribution within families in different countries is shown in figure 1, which is based on several studies. The findings indicate great deviances between the different countries with the Scandinavian countries as the far most equalitarian concerning dependency closely followed by Great Britain. In the other countries the income distributions are much more skew with wives earning much less than their husbands.

Figure 1 also indicates that a trend towards more equalitarian families is appearing in many countries, although this is not that marked in last years, which, however, is partly due to changes in income-components included in the calculations. For US Sørensen & McLanahan (1987) concludes that the dependency has decreased considerably in the period 1940-80. In 1940 a majority of married women were completely dependent on spouses for economic support, while in 1980 completely dependent women constituted a minority.

Figure 1. The distribution of income-shares in couples. 1994.

Table 1. Woman's share of income (personal net-income) in couples. 1994.

For all the countries under consideration an unequal distribution of income within the families is still prevalent, and this holds even if we are looking at the EU-countries only. Table 1 shows that for most of the Southern European Countries the income of the wife counts less than a fifth of the total personal income in the household with Portuguese women as extremely small contributers earning less than 10 per cent of the personal incomes. In the Continental European countries and Britain the average share is between 20 and 30, while married/cohabiting Danish women holds an income equal to about forty per cent of the aggregated personal adult family income.

Also the income-dispersion is much smaller in Denmark than in the other countries with the biggest deviation in income-shares within France, Belgium and the Southern European countries, Portugal becoming an extreme outlier with only a small deviation in income-shares most likely due to the very low average share of income. The variation is emphasized by the fact that in every second Danish family the wife and the husband have nearly the same income, while this is only the case of about every fourth to fifth family within the other European countries. In all the countries only very few experience an unequal distribution of income in favour of the wife, male bread-winner families becoming considerably more wide-spread everywhere.

The hypothesis that men find more financial satisfaction than do women is not confirmed empirically, neither when looking at the distribution of satisfaction within the family nor by their average satisfactions (table 2). For all the countries women are more satisfied than men the exceptions being Italy and Portugal with women less satisfied than men. The differentials are small and not significant, however, and for about 50 per cent of the couples they report the same level of satisfaction (table 2), only the liberal countries and Spain hold a smaller fraction of equally satisfied spouses, and Portugal is found to be an outlier with about only three out of four spouses being equally satisfied. The reason for this equality of opinion between spouses could be that being responsible for balancing the household budgets, as women are supposed to be more than men, makes one more realistic about the economic opportunities and, thereby, decreases the aspiration of becoming more wealthy.

Table 2. The distribution of well-being within families. 1994.

The relationship between the spouses' financial well-being and the distribution of income is shown in table 3, which depicts the coefficient from ordered probit regression models with a number of controlling variables included (not shown here, but available from the author on request).

First of all, we find negative relationships for men in most countries – significantly in Denmark, Great Britain and France - saying that the probability of being financially satisfied decreases with the proportion of income earned by the women controlling among others for the total amount of income in the family. Only Spanish men's well-being increases and even significantly the more the wife contributes to the family income. Among women, the British and Italians do increase their well-being significantly the more they contribute to the family income, which follows expectations, while there is no significant relationship for women in the other countries under consideration. The interpretation is that for most European husbands the distribution of income within the family matters for their well-being, while wives are generally more unaffected of this distribution.

Table 3. The relationship between income-shares and well-being within couples. Ordered Probit-regressions. 1994[1]

Table 4. Income shares maximizing men's and women's economic satisfaction

The estimations mentioned so far are all based on the assumption that there is a linear relationship between the income share and the financial well-being, which might be an unrealistic specification at least for the whole range of the income distribution. Thus, an inverse u-shaped relationship seems more realistic allowing the well-being to increase for women as well as for men in the first range followed by a decrease for both sexes, the maximum assumed to be reached for men before than for women. The rationale is that either men or women wish to be married to non-income earning spouses for men as long as the wife remains the junior partner in the marriage and for women as long as she does not have to provide for her husband. In other words, the income-share maximizing his well-being is expected to be smaller than the share maximizing her well-being.

Table 3 shows that Danish men as well as Danish women experience a significant inverse u-shaped relationship between her share of the personal income of the family and their individual satisfaction with the financial situation. The same holds for British, French, Belgium, Italian and Spanish women, whereas Irish and Dutch women experience a u-shaped relationship between their share of the personal income and their individual financial satisfaction, not all the relationships, however, being significant. Also for Dutch, Belgium and Portuguese men the relationship is u-shaped, while Greek, British and Danish – as told above - men experience a significant and inverse relationship implying that some sharing of income is acceptable. These findings seem to confirm the thesis that for the Scandinavian country, Denmark, there is an agreement between spouses about sharing their incomes, while Dutch husbands and wife agree upon a traditional bread-winner model with either the one or the other as the main income-earner. For the remaining countries the sharing of income within the family is preferable only for women – except the Irish - i.e. women's liberation is up to themselves independently of living in a Liberal, Continental or Southern European welfare regime.

The u-shaped relationships found for some of the countries allow for calculating the income share maximizing men's and women's economic satisfaction, and thereby the distance between that share and the actual distribution of income within the families. Table 4 shows for men and women with significant and not "completely insignificant" coefficients in the satisfaction equations in table 3 that for most women the maximising share is above the actual share, while men's are below, as expected. When comparing the different welfare regimes, we find that Scandinavian (Danish) women are closer to their preferred income share than Continental European women (French) – Belgium women are as close as Danish - who are again closer to get their preferences fulfilled than are women within the Liberal Regime (British) and in the Southern European Regime (Italian, Spanish and Portuguese). For men in Scandinavia the actual income regime is close to their preferred one, while in Great Britain there is a somewhat bigger distance, i.e. 10 per cent points. In Greece the – insignificant – figures indicate that men desire a more equal share than actually achieved, i.e. 35.5 per cent versus 19.8 per cent. In the Netherlands men and women experience the same distance to their preferred income distribution, as they both are in favour of a traditional bread-winner model with only one income earner. This is also the case of Belgium and Portuguese men, where negative results came up indicating a u-shaped relationship between income shares and economic satisfaction.

The findings show that the development towards more income equality between men and women in most European – and non-European - countries is in accordance to women's preferences for more/higher incomes, i.e. except in Ireland and the Netherlands all other women desire income equality, while men seems to be more resistant with lower preferences for income equality within the family. As expected, the longest way to go is for the Southern European women followed by women in the Continental and Liberal regimes, and with the Scandinavian women as the ones closest to achieve the same income as men.

Income sharing and economies of scale within families

In the following, the question of income-sharing and economies of scale within the family is investigated by applying models for singles and couples concurrently. The assumption is that if individuals become more economically satisfied by being married/cohabiting this might be due to either economies of scale or to income-transfers from the spouse. And the other way around, if individuals become less satisfied economies of scale, if any, are not sufficient to out-weight the offering of some income for the spouse's well-being. To distinguish between these two effects, we include a product variable in the ordered probit-regressions for women as well as for men multiplying civil-status by personal income. This latter variable is then taken as a proxy for the marginal value of earning an extra Euro in a partnership relatively to in single-hood, while the single/married variable now is a proxy for economies of scale obtained by formatting a couple.

Table 5. Well-being of men and women by civil-status and personal income. Ordered Probit-regressions. 1994.

First, we find that in the Netherlands men as well as women experience significantly more economic satisfaction when becoming partnered (table 5). A possible interpretation of the positive coefficient for men is that they are altruistic in their behaviour getting satisfaction by the mere investment in public goods, while women appreciate the access to these goods obtained through their marriage/cohabitation. Also for Greece the single/married coefficients are rather large and significant for both sexes, while for France the coefficients are more modest, and for Denmark only husbands satisfaction are affected by becoming partnered. For Danish, British and Spanish wives the coefficients are close to become significantly negative, which might indicate that they do not appreciate economies of scale as much as other women in Europe, properly because they themselves contribute to the financing of the public goods to the same extend as their partner.

Another indication of sharing of income within the family is depicted by the negative coefficients to the product variable of single/married and personal income variable in some of the countries. Thus, we find that an increase in personal income of married/cohabiting men in France and the Netherlands and of married/cohabiting women in Denmark, the Netherlands and in

Greece yield higher economic satisfaction than an increase in the personal income of singles in the very same countries. This means that every marginal Euro earned by men and women personally in these countries has a higher value, i.e. increases the well-being more, if living as singles than if being married/cohabiting. This is not to say that higher personal income does not increase economic satisfaction, only that more of such an increase is to men and women's own disposal when they are living as singles, i.e. when there is no one to share with by transferring money to the spouse directly or through the investments in public goods. However, in Britain and Spain married/cohabiting women do gain more of an extra Euro than their single sisters, while personal income in general decreases economic satisfaction. A possible explanation is that British wives are very much in favour of economic independency of their husband, i.e. the income distribution maximising economic satisfaction is the highest (table 4), and Spanish women's income share pretty low, in both cases implying a low priority to sharing of income within the family.

Conclusions

There is a growing literature on the relationship between the distribution of income within the family and well-being. However, only a few studies have been investigating the functional form of this relationship not to mention variations between different welfare state regimes.

The fact that there is a great deviance in income shares among spouses with the Nordic countries being the more equalitarian followed by the Middle-European countries, and the Southern European as the less equalitarian with Ireland as an extreme outlier, might impact on the reported well-being - economic satisfaction – among European spouses. The hypothesis is, therefore, that the more the wife earns relative to the husband, the more satisfied she becomes and the less he becomes. However, in the more advanced countries some degree of sharing could yield both partners the same satisfaction, although this share might be lower for the wife and higher for the husband, than the actual income-share in the household.

The analyses showed a negative relationship for men in Denmark, Great Britain and France saying that their financial well-being decreases with the proportion of income earned by the women controlling among others for the total amount of income in the family. Only Spanish men's well-being increases the more the wife contributes to the family income. Also British and Italian women do increase their well-being significantly the more they contribute to the family income, while there is no significant relationship for women in the other countries under consideration. The interpretation given was that for most European husbands the distribution of income within the family matters for their well-being, while wives are generally more unaffected of this distribution.

When allowing for another functional form of the relationship between income distribution and well-being, we found that Danish men and women experience a significant inverse u-shaped relationship between her share of the personal income of the family and their individual satisfaction with the financial situation. The same was found for British, French, Belgium, Italian and Spanish women, whereas Irish and Dutch women experience a u-shaped relationship between their share of the personal income and their individual financial satisfaction, not all the relationships being significant. Also for Dutch, Belgium and Portuguese men the relationship is u-shaped, while Greek and British men experience a significant and inverse relationship implying that some sharing of income is found preferable. These findings seem to confirm the thesis that for the Scandinavian countries such as Denmark, there is an agreement between spouses about sharing their incomes, while Dutch husbands and wife agree upon a traditional bread-winner model with either the one or the other as the main income-earner. For the remaining countries the sharing of income within the family is preferable only for women – expect the Irish - i.e. women's liberation is up to themselves independent of living in a Liberal, Continental or Southern European welfare regime.

The calculated income share maximising economic satisfaction were above the actual share for most women, while it was below for most men. Here, Scandinavian (Danish) women are closer to their preferred income share than Continental European women (French) – Belgium women are as close as Danish - who are again closer to get their preferences fulfilled than are women within the Liberal Regime (British) and in the Southern European Regime (Italian, Spanish and Portuguese). For men in Scandinavia the actual income regime is found close to their preferred one, while in Great Britain there is a somewhat bigger distance. In Greece the – insignificant – figures indicate that men desire a more equal share than actually achieved. In the Netherlands men and women experience the same distance to their preferred income distribution, as they both are in favour of a traditional bread-winner model with only one income earner. This is also the case of Belgium and Portuguese men, where negative results came up indicating a u-shaped relationship between income shares and economic satisfaction.

The findings showed that the development towards more income equality between men and women in most European – and non-European - countries is in accordance to women's preferences for more/higher incomes, while men seem to be more resistant with lower preferences for income equality within the family. As expected, the longest way to go is for the Southern European women followed by women in the Continental and Liberal regimes, and with the Scandinavian women as the ones closest to achieve the same income as men.

An indication of actual sharing of income within the family is found for French and Dutch men and Danish, Dutch and Greek women, who achieve higher economic satisfaction with personal income than their single brothers and sisters. The interpretation is that more of such an increase is to men and women's own disposal when living as a single than if they have to share with a spouse either through transferring money directly or through the investments in public goods. However, in Britain and Spain married/cohabiting women do gain more of an extra Euro than their single sisters, while personal income in general decreases economic satisfaction. This might be because British wives are very much in favour of economic independency of their husband and Spanish women's income share pretty low, in both cases implying a low priority to sharing of income within the family.

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Figure 1: The distribution of income-shares in couples. 1994.
Note: LIS-data includes only respondents with positive gross wages and/or salaries

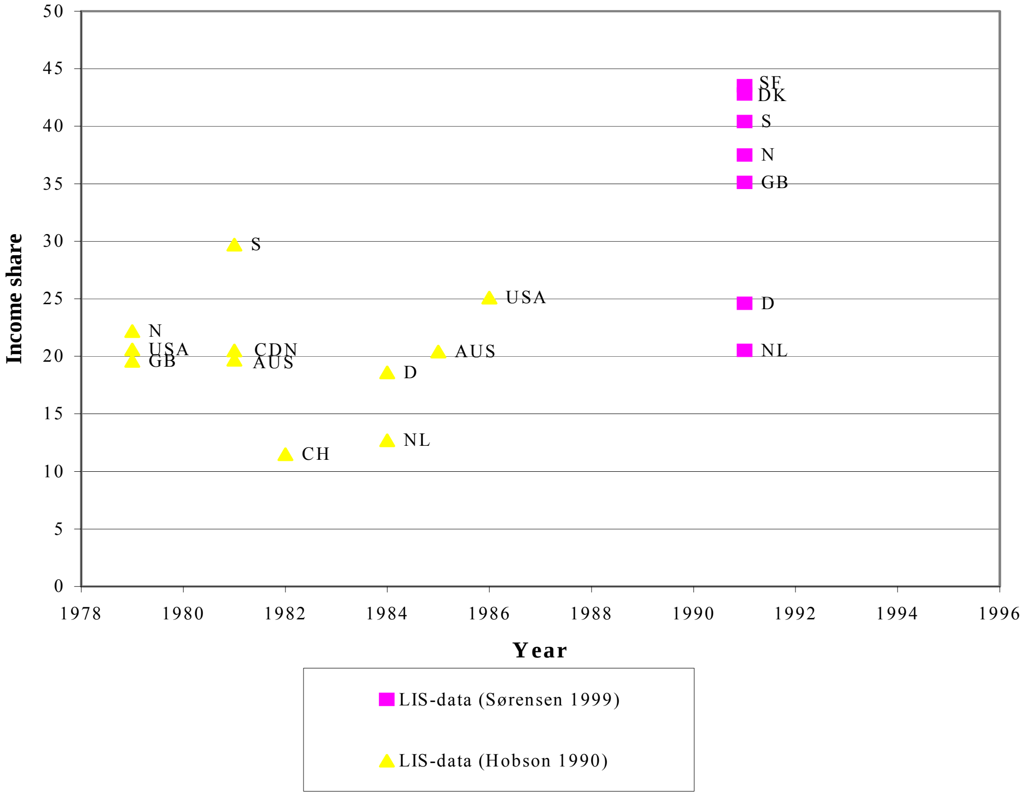

Table 1: Woman's share of income (personal net-income) in couples. 1994.

	Average (St.dev.)	*Distribution (per cent):*					#
		-20	*20-39*	*40-59*	*60-79*	*80-*	
Social democratic regime:							
Denmark	40.1 (2.4)	9.7	33.5	51.3	4.7	1.1	1692
Liberal regimes:							
Great Britain	29.3 (4.4)	37.1	34.6	20.3	5.5	2.6	2747
Ireland	17.3 (4.5)	66.7	14.8	13.9	3.5	1.1	1787
Continental Europe regimes:							
France	28.6 (5.0)	37.6	28	27.4	5.2	1.9	3954
Belgium	27.6 (5.2)	39.8	26.4	27	4.6	2.1	2152
Netherlands	23.3 (4.3)	46	30	20.8	2	1.3	2834
Luxembourg	20.1 (4.4)	56.8	22.6	16.8	2.8	1	560
Southern Europe regimes:							
Italy	18.4 (5.4)	60.3	14.8	20.3	3.4	1.2	4092
Spain	17.3 (5.2)	63.5	15.6	16.3	3.1	1.4	4265
Portugal	6.8 (2.8)	85	6	7.3	1.1	0.5	4583
Greece	19.8 (5.4)	58.6	15.9	20.1	4.3	1.2	1416

Source: ECHP, 1994.

Table 2: The distribution of financial well-being within couples. 1994.

	Average (st.dev.):		*Well-being (per cent):*				
	Husband	*Wife*	*Husband >> wife*	*Husband > wife*	*Husband = wife*	*Husband < wife*	*Husband << wife*
Social democratic regime:							
Denmark	4.65 (1.26)	4.71 (1.30)	5.5	15.4	54.8	17.2	7.1
Liberal regimes:							
Great Britain	3.60 (1.44)	3.78 (1.43)	5.2	15.3	46.2	24	9.3
Ireland	3.50 (1.59)	3.65 (1.60)	9.7	16.4	40	20.3	13.6
Continental Europe regimes:							
France	3.66 (1.29)	3.67 (1.31)	6.9	14.9	54.5	17.3	6.4
Belgium	4.17 (1.32)	4.20 (1.34)	6.2	16.6	51.6	18.8	6.8
Netherlands	4.48 (1.10)	4.59 (1.10)	2.9	16.5	53.4	21.7	5.5
Luxembourg	4.32 (1.35)	4.43 (1.35)	3.2	12.1	63.2	14.3	7.2
Southern Europe regimes:							
Italy	3.27 (1.33)	3.22 (1.35)	7.3	16	56.2	14.8	5.7
Spain	3.07 (1.39)	3.13 (1.39)	7.7	17	46.8	17.9	10.5
Portugal	3.04 (0.86)	2.98 (0.86)	2.7	10.3	78.5	7.1	1.4
Greece	2.94 (1.30)	2.88 (1.32)	5.2	17.8	58.8	13.4	4.8

Source: ECHP, 1994.

…

Table 3: The relationship between income-shares and financial well-being within couples. Ordered Probit-regressions[1]. 1994.

	Men:		*Women:*	
	wife's share of income *wife's share of income squared*	*wife's share of income, squared*	*wife's share of income* *wife's share of income squared*	*wife's share of income, squared*
	Coeff. (St.dev.)	*Coeff. (St.dev.)*	*Coeff. (St.dev.)*	*Coeff. (St.dev.)*
Social democratic regime:				
Denmark	-.422* (.204) 2.327*** (.679)	.. .. -3.265*** (.770)	.113 (.193) 2.903*** (.639)	.. .. -3.351*** (.733)
Liberal regimes:				
Great Britain	-.271* (.119) .252 (.354)	.. .. -.663 (.422)	.502*** (.094) 1.838*** (.280)	.. .. -1.699*** (.335)
Ireland	-.332 (.178) -.303 (.502)	.. .. -.042 (.694)	-.089 (.132) -.526 (.368)	.. .. .636 (.501)
Continental Europe regimes:				
France	-.411** (.126) -.305 (.396)	.. .. -.131 (.459)	-.001 (.103) .437 (.318)	.. .. -.586 (.372)
Belgium	-.156 (.179) -.570 (.576)	.. .. .513 (.679)	-.180 (.158) .571 (.503)	.. .. -.940 (.598)
Netherlands	-.227 (.170) -.919* (.467)	.. .. .910 (.574)	-.227 (.148) -1.144** (.397)	.. .. 1.225* (.493)
Luxembourg	-.186 (.380) -1.038 (1.164)	.. .. 1.159 (1.499)	-.118 (.277) -.052 (.812)	.. .. -.093 (1.062)
Southern Europe regimes:				
Italy	-.150 (.201) .180 (.633)	.. .. -.390 (.707)	.435** (.151) 1.991*** (.471)	.. .. -1.882 *** (.540)
Spain	.500* (.203) .206 (.609)	.. .. .374 (.732)	.155 (.148) 1.156** (.438)	.. .. -1.271* (.523)
Portugal	-.121 (.195) -.826 (.576)	.. .. .847 (.652)	.029 (.152) .713 (.453)	.. .. -.810 (.507)
Greece	-.119 (.179) 1.053 (.611)	.. .. -1.484* (.739)	-.190 (.139) .049 (.472)	.. .. -.311 (.586)

[1]The coefficients refer to the regression analyses in Appendix, tables A1-A11.

Source: ECHP, 1994.

Table 4: Wife's income shares maximizing men's and women's economic satisfaction.

	Men's most satisfying income share	Actual income share	Women's most satisfying income share
Social democratic regime:			
Denmark	35.6	40.1	43.3
Liberal regimes:			
Great Britain	(19.0)	29.3	54.1
Ireland	..	17.3	(-41.4)
Continental Europe regimes:			
France	..	28.6	(37.3)
Belgium	(-55.5)	27.6	(30.4)
Netherlands	(-50.5)	23.3	-46.7
Luxembourg	..	20.1	..
Southern Europe regimes:			
Italy	..	18.4	52.9
Spain	..	17.3	45.5
Portugal	(-48.8)	6.8	(44.0)
Greece	(35.5)	19.8	..

Note: .. not calculated; () calculated on insignificant coefficients, cf. table 3.

Source: ECHP, 1994.

Table 5: Financial well-being of men and women by civil status and personal income. Ordered Probit-regression-analyses[1]. 1994.

	Men:			*Women:*		
	Single/ married	*Single/married*personal income*	*Personal income*	*Single/married*	*Single/married*personal income*	*Personal income*
	Coeff. (St.dev.)	*Coeff. (St.dev.)*	*Coeff. (St.dev.)*	*Coeff. (St.dev.)*	*Coeff. (St.dev.)*	*Coeff. (St.dev.)*
Social democratic regime:						
Denmark	.170* (.081)	-.017 (.036)	.011 (.033)	-.179 (.098)	-.163* (.066)	.090 (.055)
Liberal regimes:						
Great Britain	-.026 (.060)	.044 (.034)	-.011 (.033)	-.084 (.050)	.129** (.046)	-.149*** (043)
Ireland	-.142 (.082)	-.043 (.066)	-.001 (.064)	-.028 (.084)	-.076 (.100)	.012 (.096)
Continental Europe regimes:						
France	.0193** (.068)	-.091* (.038)	.160*** (.037)	.217*** (.053)	-.062 (.033)	.109*** (.030)
Belgium	.147 (.118)	.008 (.068)	-.065 (.066)	.202* (.095)	-.090 (.072)	.080 (.067)
Netherlands	.442*** (.098)	-.177** (.062)	.255*** (.061)	.633*** (.066)	-.124** (.041)	.199*** (.035)
Luxembourg	.031 (.156)	.029 (.039)	-.001 (.035)	0.120 (.154)	.037 (.066)	.033 (.059)
Southern Europe regimes:						
Italy	.018 (.086)	.057 (.057)	-.077 (.054)	.002 (.084)	.060 (.082)	.040 (.074)
Spain	.118 (.096)	-.008 (.087)	-.308*** (.083)	-.164 (.087)	.165 (.111)	-.278** (.105)
Portugal	-.014 (.082)	.007 (.136)	.252 (.135)	-.036 (.056)	-.006 (.101)	.009 (.089)
Greece	.277** (.101)	-.211 (.120)	.450*** (.118)	.398** (.077)	-.428** (.131)	.378** (.127)

[1]Inclusive of educational level, age and ownership of dwelling.

Source: ECHP, 1994.