

DEPRIVATION OF WOMEN AND MEN LIVING IN A COUPLE: SHARING OR UNEQUAL DIVISION?

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In standard poverty analyses, all household members are assumed to share equal living conditions. Though a few national studies exist, this paper is the first to present empirical evidence on this issue for the EU, using the 2015 wave of the EU Statistics on Income and Living Conditions. We map the extent of intra-couple inequality in deprivation, and analyze its determinants. We find that for most items, the gender difference in lack between partners, though generally small, is significant and at the disadvantage of women. When aggregating the individual items into a deprivation scale, couples where the number of enforced lacks is higher for the woman (9.2 percent) are (significantly) more numerous than couples where the man is disadvantaged (6.5 percent), at the EU level. Econometric analysis shows that the work status of the partners and their relative contribution to the joint income are important determinants of the intra-couple gender deprivation gap.

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1. INTRODUCTION

In standard poverty and deprivation analyses, all household members are supposed to share equal living conditions. This assumption is for example implicit in the at-risk-of-poverty rate used at the EU level, which is derived from household income. Household income is the aggregation of individual income received by all household members as well as the income components received at the household level (such as rent, some social or inter-household transfers etc.). The same assumption has also been made to date for the EU standard deprivation indicator, which is based on nine items collected in the household questionnaire (see Guio, 2009 for a description of the EU agreed indicator). Researchers have been aware for some time that this assumption is rather restrictive (Jenkins, 1991), and could result in a downward bias of estimates of the extent of poverty and deprivation, especially among some subgroups, such as women and children. Intra-household

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inequality could mean that some persons in a household are living in poverty or deprivation, even though the household as a whole is above the threshold, and also that a family below the poverty threshold could contain someone who is above it.

A number of studies, using various methods and data, have looked into the “black box” of the intra-household distribution of incomes and consumption. Though a few have studied the distribution between parents and children (see e.g. Main and Bradshaw, 2016; Bárcena Martín *et al.*, 2017), most studies focus on the intra-couple distribution (as we will do below), covering different aspects. Some investigate the ways in which a couple’s finances are managed and controlled, while others have studied individual consumption or living standards of wives and husbands within couples (see Bennett, 2013, for a review). Only a few studies for Ireland (Cantillon and Nolan, 1998, 2001; Cantillon *et al.*, 2015) have looked at differences in deprivation within couples. These indicate that such differences are not very common, but that when they do occur they are more often to the disadvantage of wives than of husbands.

This paper is the first to present empirical evidence on this issue for a range of EU countries. It uses the data on material deprivation of the 2015 wave of the EU Statistics on Income and Living Conditions (EU-SILC), which contain a number of items on deprivation at the individual level, in addition to the usual deprivation items collected at the household level. We map the extent of intra-couple inequality in deprivation, and analyze its determinants. The paper is structured as follows. The next section reviews the literature on intra-couple inequality, discussing studies on differences in outcomes (consumption, deprivation), as well as those on management and control of a couple’s finances. Section 3 presents the data and methods used. Descriptive results are shown in Section 4, while Section 5 investigates the determinants of the gender deprivation gap. Section 6 concludes, discussing the substantive findings, as well as making recommendations for future data collection.

2. LITERATURE REVIEW

Until fairly recently, survey or other data that directly measured the living standards of partners within couples were lacking. The call by Jenkins (1991) to stop ignoring the within-household aspects of poverty was therefore first followed by studies which used alternative assumptions for the distribution of incomes within households (Bennett, 2013). Davies and Joshi (1994) examined the impact of making the assumption that there would be only minimum sharing between adults within households, and show that this leads to a much higher estimate of poverty among married women. (Also see Borooah and McKee, 1994; Phipps and Burton, 1995; Lise and Seitz, 2011; Corsi *et al.*, 2016.) Such studies suggested that there might be a substantial reservoir of hidden poverty among wives in seemingly non-poor households.

When looking into the “black box” of intra-household distribution, it is important to distinguish between outcomes and processes. The first term covers consumption, living standards, deprivation and, ultimately, well-being, while the second concept refers to financial control, resource management, income pooling

and spending of resources within households (Jenkins, 1991; Bennett, 2013). As this study is about the distribution of deprivation within couples, our focus in this literature review is mainly on the first aspect, though we also briefly discuss studies on how partners within couples arrange the control and management of income and spending between them.

While it is fairly easy to establish which individuals receive what amounts of personal income from outside the household, it is far less straightforward to measure consumption at the individual level. Many kinds of consumption are “public goods” *within the household* in the sense that use by one individual does not reduce availability to other household members (housing, heating). Other consumption items are partly public, partly private (TV, car); while even for types of consumption that are in principle purely private (e.g. food), it may be very difficult to assign the amounts consumed to individuals with a sufficient degree of precision. Yet, economists have tried to derive the “sharing rule,” i.e. the resource shares of each individual in a household, from data on household consumption and labor supply (Browning *et al.*, 1994; see Chiappori and Meghir, 2014, for a review of this line of research). Though the results of such studies often depend on the identifying restrictions (i.e. restrictions imposed on the equations to make estimation possible), along with a number of econometric issues, substantial progress has been made. A recent study by Cherchye *et al.* (2015), using US data, indicates that the shares of spouses in the full income of the couple (i.e. the potential income when both spouses would work full time, so including an implicit valuation of leisure) are generally around 50 percent (indicating equal shares), but with a lot of heterogeneity around this average. If the wage of the female partner goes up, relative to the wage of the male partner, so does her share in full household income. Also, their results indicate that individual poverty, based on full income, is much higher when modelled shares are taken into account than when equal shares are assumed, though there are no clear differences between the poverty rates for men and women. Another interesting piece of evidence is provided by Lundberg *et al.* (1997), who showed that in the UK the transfer of child allowances from husbands to wives coincided with a shift toward greater expenditure on children’s clothing and women’s clothing, relative to men’s clothing. This finding is generally interpreted as being inconsistent with the idea that household members pool all their resources.¹

The most direct evidence of unequal standards of living within couples comes from surveys in which individual non-monetary indicators of material deprivation are collected. Pioneered by Townsend (1979) and Mack and Lansley (1985), the use of non-monetary indicators of deprivation (or what Mack and Lansley termed “socially perceived necessities”) has entered mainstream studies of poverty and social exclusion, as exemplified by the inclusion of “severe material deprivation” in the headline indicator of the Europe 2020 strategy target on the risk of poverty and social exclusion. However, these indicators usually refer to the household level. There have been only a few representative surveys in which indicators of material deprivation were collected on the individual level. One of the first of these was by Vogler and Pahl (1994) for the UK, who show that the relationship between control and management of household finances on the one hand, and deprivation on the

¹Though Bennett (2013) discusses evidence that challenges this interpretation.

other hand, is a complex one. The authors show that in the poorest households, the wife's responsibility for managing the household finances benefits the husband, who is protected from the deprivation from which the wife suffers. Female control of finances did not necessarily protect them against financial deprivation; however, male control of finances tends to protect the financial interests of men in comparison with those of women. Joint control of pooled money is the allocative system which leads to more equality in the couple.

Cantillon and Nolan (1998; see also Cantillon and Nolan, 2001) initiated and used Irish survey data of 1987 that contain items of deprivation at both the household and the individual level. These items are similar to those recently agreed at the EU level to be included in the revised measure of material deprivation. Focusing on married partners who both completed the individual questionnaire, they show that spouses differ much more concerning the possession or lack of personal items (e.g. holiday, clothing, shoes, leisure) than about items that are usually shared within households (e.g. items referring to the dwelling, a car, a color TV). A hobby or leisure activity is the item where the difference is largest. More often it is the wife rather than the husband who lacks an item. As these differences might be the result of different tastes (e.g. having no interest in a hobby), rather than differential access to the household's resources, respondents were additionally asked whether they were doing without the item due to lack of money (i.e. enforced lack). Divergent answers (i.e. the wife cannot afford an item, while the husband has the item or does not have it for other reasons, or the other way around) are now more common, notably for a week's holiday and a hobby. For most items, more women than men are disadvantaged. When aggregating the answers to the items into a summary score, it turns out that there is no difference between the spouses in 54 percent of cases. Among the remaining couples, wives are somewhat more likely than husbands to have a higher score than their partner (26 vs. 21 percent). Alternative ways of looking at the data confirm these results. A multivariate analysis of the gap between wife's and husband's deprivation shows that it is not systematically related to household income, social class or age, but significantly also shows that if the woman has an income of her own, the gap is smaller.

Another empirical strand of the literature looks at how couples organize their finances, and in particular at the degree to which partners keep their incomes separate or pool all their resources. Qualitative studies on this issue revealed various allocative systems, some of which imply that power and control are unequally divided between marriage partners (Pahl, 1983, 1989; see also Bennett, 2013, for a review of this literature.) Ponthieux (2017), using the EU-SILC 2010 module on intra-household allocation of resources, shows that there are large differences between countries in the degree of income pooling: while in Spain, Hungary and Lithuania more than 80 percent of all wives pool all of their income (if they have one), this percentage is less than 50 percent in Malta, Romania, Austria and Slovakia. The proportions among husbands are in all countries quite close to those of wives, though not equal—apparently husbands and wives can have different perceptions of the extent of pooling in their household.

However, as Bennett (2013) emphasizes, it would be a mistake to try to read off inequality in outcomes from these allocation systems. Power in the household is not necessarily used to consume more than an equal share of the household's means.

(As Korpi, 2000, remarks, in rich countries it may no longer be socially acceptable for a husband to offer his wife a noticeably lower standard of consumption than his own.) This is confirmed by Cantillon *et al.* (2015) who use data on individual deprivation collected in the Irish survey combined with data on intra-household sharing of resources from the 2010 ad-hoc module of EU-SILC (as individual items were only collected in Ireland, they are limited to the Irish data). They found that the couple's financial regime did matter for individual deprivation, but not always in the way that might have been expected. In this study, no evidence was found of higher individual deprivation for the female partner when she did not work for pay or receive an individual income. Where couples pooled all their personal incomes, and controlling for level of income and other factors, the level of individual deprivation tended to be higher. Shared decision-making within couples was associated with a lower risk of individual deprivation. Interestingly, the presence and number of children had a stronger effect on individual deprivation for women than for men. Perhaps mothers try to shield their children from deprivation by spending less on their own needs. Bárcena-Martín *et al.* (2016), using the same EU-SILC 2010 special module, study the relation between the financial regime of a couple and deprivation on the household level. Their results suggest that sharing incomes and decisions, when controlling for the effects of other socio-economic determinants, is associated with lower levels of deprivation. When there is no income pooling, the female tends to have a lower level of deprivation when she takes decision responsibilities. On the other hand, a financial regime characterized by not pooling incomes and sharing decisions is related to the highest levels of deprivation, when controlling for other sociodemographic variables. This regime is linked to dual-earner households, higher household income levels, and younger or middle-aged households, and is less associated with households with children and couples in a legal consensual union.

While it is too early to draw definite conclusions, the studies cited allow a few generalizations. First, studies do not establish a straightforward link between systems of control and management of couples' finances on the one hand and differences in individual deprivation between women and men on the other. Secondly, studies of individual deprivation found differences between partners in couples which are somewhat more often to the disadvantage of the woman than the other way around. But there appears to be no evidence of a substantial reservoir of "hidden poverty" among women in couples. Thirdly, the woman having paid work or an income of her own is associated with a smaller likelihood that she is disadvantaged relative to her husband. In the rest of the paper, these preliminary conclusions will be confronted for the first time at the EU level with new evidence about the extent and determinants of differences in individual deprivation among couples.

Figure 1 illustrates some of the factors that determine differences in individual deprivation within couples. The data do not allow us to estimate the size of the various flows and effects mapped in the diagram (mainly because there is no EU-SILC wave yet where both the intra-household allocation of resources and deprivation on the individual level were measured). The diagram may be helpful as a heuristic tool to understand the complexities involved in analyzing individual deprivation within couples, and to facilitate the interpretation of our findings in terms of the broader issue of inequality within couples.

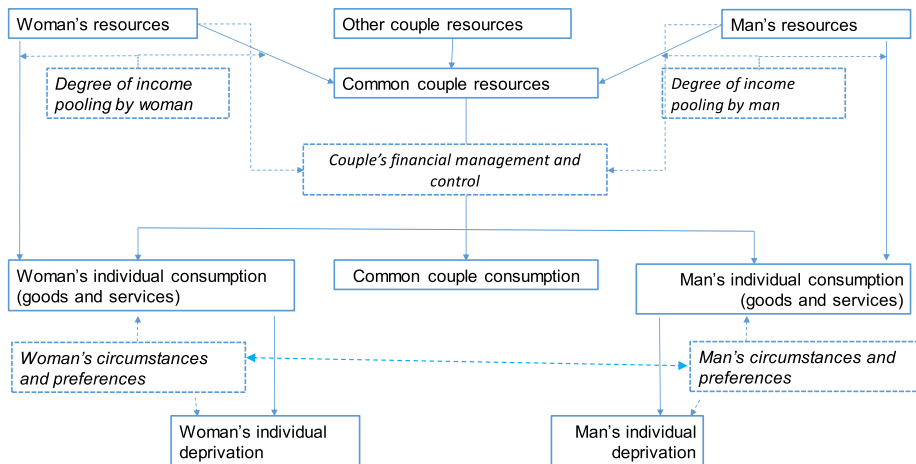


Figure 1. A conceptual framework to understand individual deprivation within couples

Notes: Solid boxes indicate material quantities of resources or goods and services; dashed boxes with text in italic indicate immaterial factors; solid lines indicate flows of resources; dashed lines indicate other effects. In this chart, as in the rest of this paper, we use “woman” as shorthand for female partner, and “man” for male partner. To avoid cluttering up the diagram, household or joint couple deprivation is not represented. Obviously, it depends on the common couple consumption, as well as on the circumstances of the household, and the preferences of its members. [Colour figure can be viewed at wileyonlinelibrary.com]

Wives and husbands can keep all or some of their resources (earnings, social benefits, capital, and company car) for themselves or put all or some of them into the pool of common household resources. The degree of (partial) income pooling is not necessarily the same for the woman and the man. Depending on who is in control of the common household budget, and the way he or she manages it, it can be spent in various ways on common household goods and services and/or individual consumption by the woman and by the man. The degree of control over the common household budget is likely to be influenced by the resources brought into the household by the partners. The goods and services that the woman and the man can obtain are of course the main determinant of their level of deprivation, though this relationship is mediated by their circumstances and preferences. For example, if neither of the partners has a smartphone, one of them may regard this as a deprivation (because her friends maintain contact through Facebook), while the other does not (because he meets his friends at a sports club).

The framework sketched in Figure 1 and the previous paragraph has three important implications:

- Putting all resources into a common budget (‘pooling’) does not imply an equal or equitable distribution of the budget between wife and husband. Depending on the control of the common budget, one may be favored over the other.
- Equal—or equivalent—consumption by the woman and the man does not necessarily imply that they have equal levels of deprivation. As pointed out above, circumstances may differ, and one partner may have higher

- standards than the other. For this reason, for individual couples, a difference in deprivation between the partners does not necessarily point to an unequal distribution of resources within that particular couple. Only systematic differences across couples in deprivation between partners—by gender, by employment status or by other characteristics—are a clear indication of inequality within couples in the population as a whole.
- Conversely, and for the same reason, unequal consumption does not necessarily mean that one partner is more deprived than the other. Importantly, though rather obviously, in a couple with a sufficient income, the partner who gets the lesser share may still have sufficient resources to escape deprivation. This may occur often in the richer countries of the EU. Therefore, finding that in most couples neither of the partners suffers from any deprivation should not be taken to imply that there is not much inequality within couples.

3. DATA AND METHOD

In 2009, the then 27 EU countries and the European Commission adopted material deprivation (MD) indicators. These indicators are widely used by EU countries and the Commission to monitor progress in the fight against poverty and social exclusion at national and EU levels in the context of EU cooperation in the social field (see Guio, 2009; Fusco *et al.*, 2011). These indicators are based on the EU Statistics on Income and Living Conditions (EU-SILC). The EU MD indicators are aggregated indicators which combine nine material and social items that are customary in all Member States. Basically, the method used is the socially perceived necessities approach introduced by Mack and Lansley (1985). These nine items are: coping with unexpected expenses; one-week annual holiday away from home; avoiding arrears; a meal with meat, chicken, fish or vegetarian equivalent every second day; keeping the home adequately warm; a washing machine; a color TV; a telephone; a personal car.

The main limitations of these MD indicators are the small number of items on which they rely and the weak reliability of some of them. That is why a thematic *ad hoc* module on MD was included in the 2009 wave of the EU Statistics on Income and Living Conditions (EU-SILC). Guio *et al.* (2012) analyzed the robustness of all MD items available in the 2009 EU-SILC survey (core survey plus module—covering various aspects of living conditions including housing, local environment etc.). Their analysis was both theory and data driven. From a theoretical point of view, it largely relied on the Townsend theory of relative deprivation. From a statistical point of view, the in-depth robustness analyses included tests related to the dimensionality, suitability, validity, reliability (both for individual items and for the whole scale) and additivity. This systematic item by item analysis by Guio *et al.* carried out at both EU and country levels identified an optimal set of 13 deprivation items—six were already part of the agreed 9-item EU MD indicator and seven are new. Among the nine items included in the current EU MD indicators, three were therefore identified as inadequate measures of deprivation in a number of countries (enforced lack of a washing machine, a TV and a telephone), and not retained.

Seven items collected in the 2009 MD module also satisfactorily met the indicator quality criteria and contribute to building a robust measure of MD across the EU. These items are the inability for a person/household to:

1. replace worn-out clothes with new ones;
2. have two pairs of properly fitting shoes;
3. spend a small amount of money each week on him/herself;²
4. have regular leisure activities;
5. get together with friends/family for a drink/meal at least monthly;
6. have an internet connection;
7. replace worn-out furniture.

Among the seven new items, the first six items are collected at the individual adult level (for all persons aged over 15 years). The last item is collected at the household level. The seven new items were collected in EU-SILC 2014 and since then, they have been collected annually. The 13 MD items have successfully gone through a number of additional analyses and robustness tests based on the 2014 data, including a focus on robustness over time (Guio *et al.*, 2017). These items will now be used by Member States and the Commission to replace the current EU nine-item MD indicator.

For the first time at the EU level, the MD indicator will capture intra-household differences in deprivation among adults living together. In this paper, we will focus on the adult items to better understand the extent of intra-couple inequality.

Please note that the “register” countries where the information is only collected for one selected respondent in the household (and not for all adult members) could not be included in this analysis (Denmark, Finland, the Netherlands, Sweden). Also in the UK the adult information was collected for the whole household, via one household question, and not separately for all adults.

The analysis is obviously limited to married and cohabiting couples. Since we are interested in differences between women and men, the small number of same-sex couples was excluded from the analysis. When one or more answers from one or both of the partners were missing, the couple is not included in the analysis. Table A1 in the annexes shows the number of couples in the sample by country.

The information on adult deprivation is collected via a three-answer categories question:

“Can you tell me if”:

1. You have the item;
2. You do not have the item because you cannot afford it;
3. You do not have the item for any other reason.”

²One might argue that having or lacking pocket money is part of the intra-couple allocation of resources, and, being neither a good nor a service, is a potential cause of individual deprivation, rather than being a part of it. However, having pocket money can contribute to a person’s autonomy, and therefore to her well-being, independently of the goods and services consumed. In any case, we follow in this the selection of items for EU-SILC (see Guio *et al.*, 2012).

Two concepts of “lack” can be defined:

In the simple lack concept, people lacking the item (categories 2 and 3) are considered as deprived, whatever the reason why they do not have the item.

In the enforced lack concept, only people who lack the item for the affordability reason (and not for any other reason) are considered as deprived. This last definition is the one retained in the large majority of publications related to deprivation and in the definition of the EU commonly agreed indicator of material deprivation. This is also the definition we use in this paper. However, we replicated our analysis using the simple lack concept instead, in order to test whether differences within couples are due to tastes or different subjective assessments of the reason why the item is lacking (cannot afford versus other reasons) or to differences in the possession of the item. It is conceivable that some partners do not want to admit that they lack an item—when the other partner has it—because they cannot afford it, in order to maintain the illusion of a fair distribution. In those cases, differences might show up when the simple lack concept is applied, which would remain hidden with the enforced lack. These results are available on demand. Our main conclusions are confirmed using the simple lack concept instead of the enforced lack concept.

Given the partly subjective nature of the deprivation questions, the mode of interviewing may be important. This varies across the selected countries (see Di Meglio, *et al.*, 2017). Most countries use face-to-face interviewing (where answers are recorded either on paper or in a computer), though in some countries part or all of the interviewing is done by telephone. The possible effect of interviewing mode on the answers to the deprivation questions is examined in Section 5. Answers may also be affected by the presence of the partner when respondents are interviewed (see Cantillon and Newman, 2005), but we have no information on this. Most importantly, proxy interviews are allowed when a sample individual is not available for interviewing; the proxy respondent is generally the partner. A proxy respondent might be hesitant to say that the reason her or his partner lacks an item is that he or she cannot afford it, especially when she or he gave earlier a different answer to the same question when it referred to her- or himself. A case could be made for excluding proxy interviews from the analysis sample. We have not done so, as that would result in a large reduction of the number of observations for some countries. Also, the resulting sample would be selective, as most proxy interviews are for persons who are at work. We performed a number of sensitivity tests, which show that our main results are not sensitive to the in- or exclusion of proxy interviews.³

In the next section, we will first present, for the pooled set of countries, the distribution of the nine possible combinations of answers (given the three possible answers above) among couples for each item. We then look at differences in deprivation for each item within couples by country. The descriptive analysis then proceeds by aggregating the six items into a deprivation scale for each individual, and computing the “deprivation gap,” i.e. the difference between the scale values between wives and husbands. In Section 5, we present the results of an econometric analysis of the deprivation gap between partners, showing the relationship of the deprivation gap with socio-economic characteristics as well as with some variables relating to the data collection.

³Detailed results are available on request from the corresponding author.

4. DESCRIPTIVE ANALYSIS

4.1. Gender Differences in Access to Individual items

Figure 2 shows the proportion of concurring couples, i.e. couples where both partners give the same answer to an item, for the pooled set of countries (EU Member States except the UK, Sweden, Finland, the Netherlands, and Denmark, see above). It ranges from 81 percent (leisure) to 97 percent (shoes). The degree of concurrence for the internet item is probably due to the way the question was asked. Adults were asked if they had access to internet for personal use *at home*. A large degree of similarity is therefore expected for those living under the same roof. To a certain extent, the proportion of people “having” the item affects the degree of concurrence: items possessed by nearly the whole population have a high probability of being possessed by both partners.

But even when (to control for this effect) we drop from the sample the couples in which both partners have the item, and we focus only on couples in which there is at least one partner lacking the item, there is a majority of couples where both partners do not have the item, as illustrated in Figure 3. However, a non-negligible proportion of couples diverge (at least one third of couples where at least one partner lacks the item, except for internet). It is therefore interesting to investigate whether divergence is gender-specific and what are the other factors that increase it.

Looking at the different patterns of replies among diverging couples (i.e. couples where the partners do not give the same answer)—firstly irrespective of the gender of partners—Figure 4 shows that:

- a. The proportion of couples in which one partner has the item and the other does not for affordability reasons, i.e. the most potentially discriminatory situation is proportionally more frequent for items such as pocket money, getting together with friends, clothes.

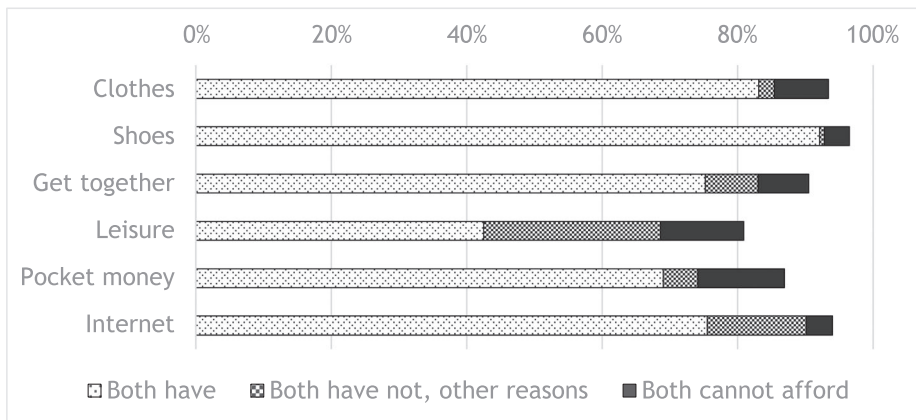


Figure 2. Percentage of couples providing the same responses by answer category, EU pooled data, 2015

Note: These proportions are computed on the basis of the three possible answers to the items. Here and in the rest of the paper, the results are weighted in order to take into account sample selection and non-response.

Source: EU-SILC 2015 cross-sectional data, authors' computation.

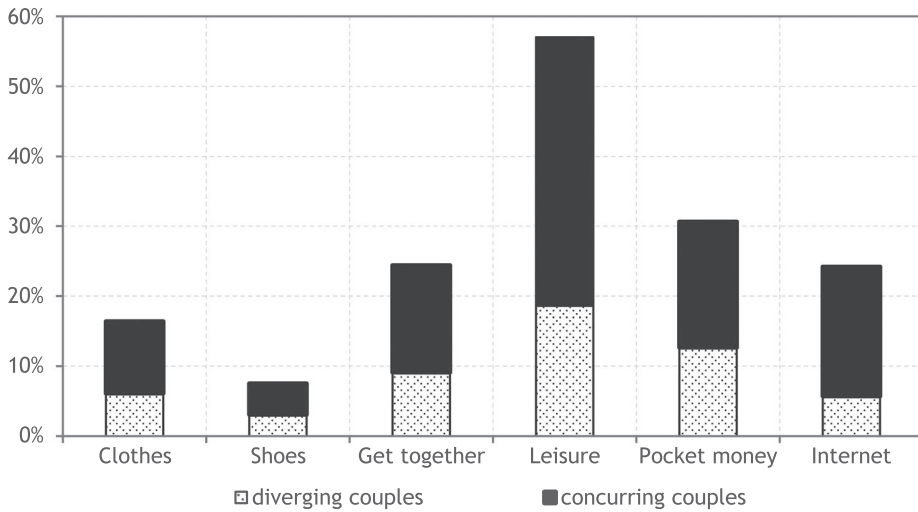


Figure 3. Percentage of couples providing the same or diverging responses, among couples in which at least one partner does not have the item, EU pooled data, 2015

Note: These percentages are computed on the basis on the three-answer modalities of reply, relative to the complete sample of couples. For example, if one partners cannot afford the item and the other lacks it for other reasons, they are classified among diverging couples.

Source: EU-SILC 2015 cross-sectional data, authors' computation.

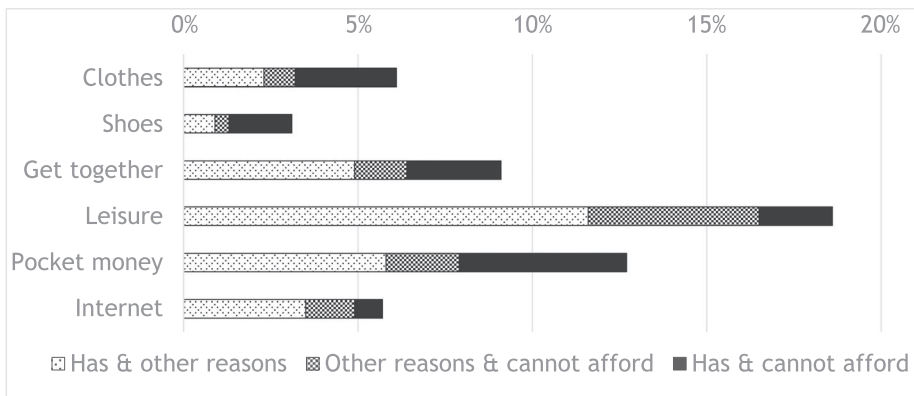


Figure 4. Percentage of couples by response category, diverging couples, EU pooled data, 2015

Note: these percentages are computed on the basis on the three-answer modalities of reply, relative to the complete sample of couples. For example, if one partners cannot afford the item and the other lacks it for other reasons, they are classified among diverging couples.

Source: EU-SILC 2015 cross-sectional data, authors' computation.

- b. The most frequent divergent pattern is a situation where one partner has the item and the other partner lacks it for “other reasons.” This proportion reaches almost 12 percent of all couples in the case of leisure activities and around 5 percent for pocket money and getting together with friends. In such cases, differences in preferences are supposed to explain why partners do not both possess the item. According to the deprivation definition based

on the enforced lack concept, these couples are not considered as diverging: both partners are considered as “non-deprived.”

- c. The proportion of couples not having the item but attributing it to different reasons (one partner saying that it is due to unaffordability and the other to “other reasons”) is smaller. It is, however, non-negligible for items such as leisure (5.9 percent) and pocket money (2.1 percent).

Table 1 shows whether women and men have equal chances of being the “disadvantaged” partner in diverging couples. It provides the distribution of the different types of divergence, i.e. the distribution of couples among the possible combinations of answer options. The last part of the table regroups these couples according to their deprivation status (enforced deprivation). When we compare the situation of women and men in diverging couples, our results show that:

- a. There are more men than women who live in couples where they are the only partner having the item, whereas the partner cannot afford it (rows 1-2). The difference is less than 0.5 percentage points for all items, except pocket money, though significantly different from zero for all items, except the internet;
- b. There is no significant difference between the proportion of couples where the man has the item and the woman lacks it for “other reasons” and the proportion where the opposite is true, except for clothes and pocket money (rows 3-4). The imbalance is, however, in favor of women for clothes and in favor of men for pocket money;
- c. In couples where both partners lack the item, there are slightly fewer women than men who attribute this lack to “other reasons” rather than to “affordability reasons” (rows 5-6). The difference is significant for all items except shoes and the internet. This reinforces the gender differences in enforced lack;
- d. The deprivation status (enforced lack vs. possession/lack for other reasons) is the overall results of these differences (rows 7-8). Gender differences in deprivation, though generally small, are significant and to the disadvantage of women, except for internet for which there is no significant difference. For the other items, they range from 0.2 percentage-points (shoes) to 1.9 percentage-points (pocket money).

Tables 2 and 3 present summary information by country. Table 2 presents the proportion of couples with similar responses (the percentage of *concurring* couples). This shows that the degree of concurrence is in general large, but varies a lot between countries. Malta and to a lesser extent Slovenia appear as outliers, with percentages concurring close to 100 percent.

Table 3 presents the significant differences (among diverging couples) between the proportion of couples in which the woman is disadvantaged (based on the enforced lack concept) and the proportion in which this is the case for the man, by country and by item. In other words, a negative value indicates that the proportion of couples where the woman is the only partner deprived is significantly higher than the proportion where the man is in this situation. Confidence intervals for the difference are presented in Table A2 in the annexes.

TABLE 1
DISTRIBUTION OF COUPLES ACCORDING TO THE (NON-)OVERLAP OF THE RESPECTIVE ANSWER OF THE TWO PARTNERS, BY ITEM, EU POOLED DATA, 2015

	Clothes	Shoes	Get together	Leisure	Pocket money	Internet
Diverging couples						
1 Has (W)—Unaffordability (M)	6.6%	3.5%	9.5%	19.1%	13.1%	6.1%
2 Has (M)—Unaffordability (W)	1.3%	0.8%	1.2%	0.9%	1.6%	0.4%
<i>difference</i>	1.6%	1.0%	1.5%	1.2%	3.2%	0.4%
	-0.2%	-0.2%	-0.3%	-0.4%	-1.6%	0.0%
	[-0.4; -0.1]	[-0.3; -0.1]	[-0.5; -0.2]	[-0.5; -0.2]	[-1.8; -1.4]	[-0.1; 0.0]
3 Has (W)—Other reasons (M)	1.3%	0.5%	2.5%	5.7%	2.5%	1.7%
4 Has (M)—Other reasons (W)	1.0%	0.4%	2.4%	5.9%	3.3%	1.8%
<i>difference</i>	0.3%	0.0%	0.1%	-0.2%	-0.8%	-0.1%
	[0.2; 0.4]	[-0.1; 0.1]	[-0.1; 0.3]	[-0.5; 0.1]	[-1.0; -0.5]	[-0.3; 0.0]
5 Other reasons (W)—Unaffordability (M)	0.4%	0.2%	0.7%	2.2%	0.9%	0.7%
6 Other reasons (M)—Unaffordability (W)	0.5%	0.2%	0.8%	2.7%	1.2%	0.7%
<i>difference</i>	-0.2%	0.0%	-0.2%	-0.6%	-0.3%	0.0%
	[-0.2; -0.1]	[-0.1; 0.0]	[-0.3; -0.1]	[-0.8; -0.4]	[-0.4; -0.2]	[-0.1; 0.1]
Deprivation status						
7 Enforced lack (M)—Non-deprived (W)	1.7%	0.9%	1.8%	3.1%	2.5%	1.0%
8 Enforced lack(W)—Non-deprived (M)	2.1%	1.2%	2.3%	4.0%	4.4%	1.1%
<i>difference</i>	-0.4%	-0.2%	-0.5%	-0.9%	-1.9%	-0.1%
	[-0.6; -0.2]	[-0.4; -0.1]	[-0.7; -0.3]	[-1.2; -0.7]	[-2.2; -1.7]	[-0.2; 0.1]

Note: 95% confidence intervals of the differences in the proportion of couples are provided in brackets.
Source: EU-SILC 2015 cross-sectional data, authors' computation.

TABLE 2
PERCENTAGE OF CONCURRING COUPLES, BY ITEM AND COUNTRY, 2015

	Clothes	Shoes	Get together	Leisure	Pocket money	Internet
Bulgaria	84.6	84	84.9	78.8	80.8	89.7
Italy	85.1	93.4	82.1	75.3	78.9	85.1
Serbia	86	87.8	86.2	77.4	80.3	89.3
Latvia	88.7	90.5	91.6	82.6	90.7	94.7
Slovakia	89	98	88.8	78.7	83.2	99.7
Hungary	90.3	97.5	88.2	83.2	88.9	92.9
Romania	90.3	90.3	89.3	84.7	85	87.8
Croatia	90.5	97.1	90.3	75.1	79.8	90.3
Lithuania	90.8	99.3	87.6	80.3	89.4	94.8
Cyprus	91.3	98.8	96.2	74.5	90.8	86.4
Ireland	91.7	94.9	82.9	67.6	90.6	96
Austria	93.1	98.8	85.3	76.3	83.3	98.6
Estonia	93.6	98.7	88.8	70.9	90.5	98.3
Portugal	93.7	98	89.4	69.5	75.8	94.6
Poland	93.9	99	89.5	82.7	86.4	96.2
Czech republic	94.1	97.6	93.9	78.2	88	100
France	96.1	96.7	94.4	67.9	87.8	97.5
Belgium	96.7	98.7	93.2	84	93.5	97.1
Spain	96.8	99.5	92.2	83.9	85.4	94
Luxembourg	97.8	99	93	74.8	89.3	96.9
Greece	98.1	99.3	78.5	81.7	82.7	94.1
Slovenia	99.5	99.7	98.3	84.6	99	92.8
Malta	99.6	99.4	99.3	98.5	96.4	98.6

Note: Countries are ranked according to the percentage of the first item (clothes). Shaded cells indicate percentages larger than 90.0.

Source: EU-SILC 2015 cross-sectional data, authors' computation.

Table 3 shows that in countries and for items where the difference is significant, the proportion of couples where the woman is the only partner deprived is higher than the proportion where the man is in this situation, showing a systematic gender-specific pattern (the only exception is for leisure in Cyprus). Table 3 also shows that the difference (between the two proportions) is far larger in many countries than it is at the overall EU level.

Shoes and the internet are the two items for which the difference is least often significant across the EU countries. A second group is composed of items such as clothes and getting together with friends, for which the difference is significant in around ten countries. The items which lead to higher gender differences are those related to pocket money (where the difference is significant in almost all countries) and leisure activities (significant in 16 countries).

The countries in which gender differences within couples concern a larger set of items are: Romania (all items); and Bulgaria, Latvia, Portugal, France, Austria, Slovakia, Serbia (4 items out of 6). It is notable that the countries in which these gender differences are larger or occur for more items than the EU average include some of those with the highest overall levels of deprivation (Bulgaria, Romania, Latvia, Serbia), but also some countries in which deprivation is lower than the EU average (Austria, France). On the other hand, at the bottom of the table we find only countries with relatively low proportions of people living in deprivation.

These first descriptive results confirm the conclusions of the literature review: in a majority of couples there is no difference in individual replies to the deprivation

TABLE 3

DIFFERENCE BETWEEN THE PERCENTAGE OF COUPLES WHERE THE WOMAN IS DEPRIVED OF THE ITEM AND THE MAN IS NOT, AND THE PERCENTAGE OF COUPLES WHERE THE MAN IS THE ONLY PARTNER DEPRIVED OF THE ITEM, IF SIGNIFICANTLY DIFFERENT FROM 0 ($p = .05$), ENFORCED LACK, BY COUNTRY, 2015

	Clothes (%)	Shoes (%)	Leisure (%)	Pocket money (%)	Get together (%)	Internet (%)
Romania	-2.20	-2.20	-1.40	-2.30	-1.50	-1.50
Serbia		-1.60	-2.20	-8.60	-1.30	
Portugal	-1.00		-1.50	-7.00	-1.40	
France	-0.70		-1.40	-3.70	-0.40	
Slovakia	-1.70		-1.60	-2.30	-1.20	
Austria	-1.00		-2.30	-2.00		-0.50
Bulgaria	-2.30	-2.60		-2.00	-2.60	
Latvia	-2.80	-1.40		-1.40		
Greece			-1.30	-3.70	-1.40	
Croatia			-1.10	-3.40	-1.20	
Hungary	-2.30		-2.30	-2.00		
Slovenia	-0.30		-0.90	-0.30		
Lithuania	-1.60		-3.40		-1.90	
Cyprus			2.10	-2.10		
Spain			-0.80	-1.60		
Estonia			-1.10	-1.20		
Poland			-2.10	-0.80		
Italy				-1.80		
Czech republic				-1.40		
Luxembourg				-1.10		
Belgium				-1.00		
Ireland						
Malta						

Note: Countries ordered by number of items for which there are significant differences, and when that is equal, by difference for pocket money.
Source: EU-SILC 2015 cross-sectional data, authors' computation.

questions. However, a substantial proportion of couples diverge (at least one third of couples where one or both partners lack the item, except for internet). Among diverging couples, at the EU level and for all items except internet, the percentage of couples in which the woman is the only partner who is deprived is close to, yet always slightly higher than the proportion of couples in which the man is in this situation. Differences vary by item and country, but when statistically significant they are always at the disadvantage of women.

The next section will look at the degree of concentration of this disadvantage once the six items are aggregated into a deprivation scale.

4.2. *Differences in the Number of Items Lacked*

We now focus on the cumulation of deprivations. The six items are aggregated into an unweighted deprivation scale for each individual (ranging from 0 to 6). We did not weigh the items (for instance by the proportion of individuals having the item within each country), as the results are more easily interpretable without weighting.⁴ For each couple, the difference between the sum of deprivations of the woman and the man is computed; this is “the gender deprivation gap.”

The deprivation scale cumulates the divergences at the item level, described in the previous section. While differences in deprivation within couples are not uncommon (in total, partners have different deprivation scores in almost 16 percent of all couples, see Figure A1 in Annex), deprivation gaps at the disadvantage of the man (6.5 percent) are nearly as frequent as deprivation gaps at the disadvantage of the woman (9.2 percent). Yet, on the aggregate the difference is clearly in disfavor of women.

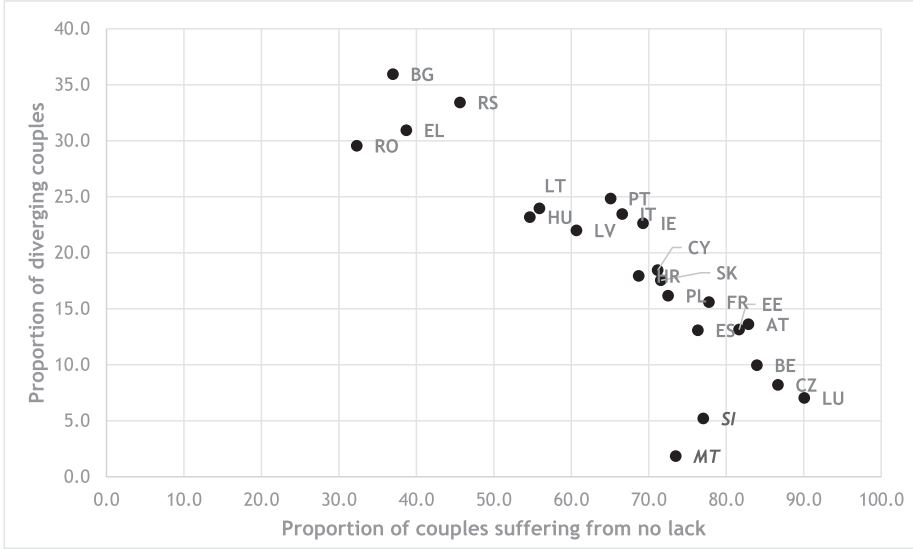
The deprivation gap affects in most cases one or two items, rarely more (less than 1% of the sample, see Figure A1 in Annex). In the remainder of the paper, we therefore focus on the existence of a deprivation gap, ignoring the number of items that constitutes this difference.

At the national level, Figure 5 illustrates the large country differences in the extent of divergence within couples. Panel A shows that the proportion of diverging couples is negatively correlated with the proportion of couples suffering from no lack, as suspected in the previous section. In countries such as Bulgaria or Serbia in which only 40 percent of couples in total escape any form of adult enforced deprivation, the degree of divergence is the highest. Figure 5 panel A highlights a few exceptions to this rule: Malta and Slovenia show a very low degree of divergence, as compared to other countries with a similar deprivation rate. This is also true for Romania, though much less so. Apart from these outliers, the negative correlation might suggest that the extent of deprivation among couples in a country is related in a substantive sense to the extent of divergence within couples. On the other hand, the correlation could be an observational artefact: when there is no lack, there cannot be divergence; in a hypothetical country in which no adults living in couple lack any item, divergences within couples could not be observed.

Figure 5, panel B shows that this relationship disappears when the number of diverging couples is expressed as a percentage of couples where divergence

⁴A discussion of the impact of weighting on the EU material deprivation indicator can be found in Guio (2009).

(a) Diverging couples among all couples



(b) Diverging couples among couples in deprivation

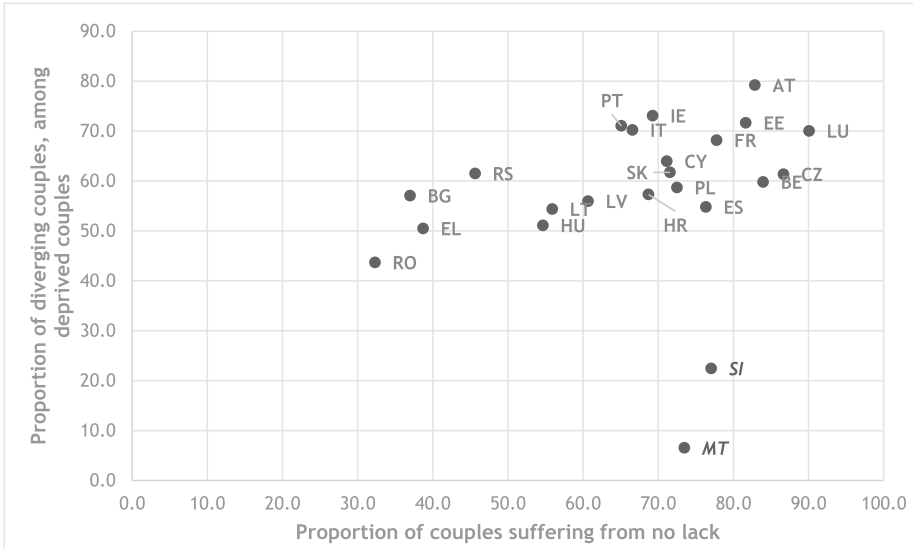


Figure 5. Percentage of diverging couples by proportion of couples without any lack, by country, 2015

Note: couples in deprivation are those where there is at least one partner lacking one item (enforced lack concept).

Source: EU-SILC 2015 cross-sectional data, authors' computation.

can be observed, i.e. where at least one partner is lacking an item. Countries with very different proportions of couples suffering from at least one lack can reach similar levels of divergence (compare Luxembourg and Portugal, or Belgium and

Bulgaria, for example). Austria is the country in which the degree of divergence is the highest within deprived couples. This suggests that the cross-country variation in gender differences in deprivation within deprived couples is not related to the overall level of deprivation in a substantive sense, but mainly due to other factors. Malta and Slovenia also appear as outliers in Panel B, which raises questions about the method of data collection of the individual items in these two countries. We will investigate these questions in the next section.

Figure 6 looks at differences by gender. It presents the proportion of couples in which the woman suffers from more deprivations than the man and the proportion of couples in which the opposite is true. It shows that there are only a few countries in which the proportion of couples in which the woman is the disadvantaged partner does not exceed the proportion in which the man is in this situation (Cyprus, and Malta). The next section will investigate the determinants of the deprivation gap.

5. WHAT ARE THE SOCIO-ECONOMIC DETERMINANTS OF THE GENDER DEPRIVATION GAP?

As discussed in previous sections, the deprivation gap depends to a certain extent on the deprivation level of couples. When couples are not deprived of any item, it is obviously impossible to observe a deprivation gap. The deprivation items used in this paper measure only low standards of living, and do not differentiate among those whose standards of living exceed a certain threshold. Therefore, differences in the standard of living between men and women when they are both above that threshold are not measured. To take into account the endogeneity of the deprivation gap, we have estimated a system of three equations (the probability of suffering from deprivation at the couple level, the probability that the deprivation gap in the couple is at the disadvantage of the woman, the probability that the deprivation gap in the couple is at the disadvantage of the man).

Table 4 shows the results of this procedure. We estimated the same model for the deprivation gap at the disadvantage of the female partner, and then for deprivation gap at the disadvantage of the male partner.

Independent variables in the first equation (deprivation of the couple) include:

- Household equivalized income (logarithm);⁵
- Highest age of the partners;
- Educational attainment of the highest educated partner;⁶

⁵The disposable income of a household is obtained by summing up all monetary incomes received from any source by any member of the household or the household itself and then deducting taxes and social contributions paid by the household. The total (net) household income is divided by the number of "equivalent adults," using a standard (equivalence) scale: the modified OECD scale; this scale gives a weight of 1 to the first adult, 0.5 to the other adults and 0.3 to children.

⁶The educational attainment of the highest educated partner is operationalised by three dummies: low education (no education, primary education or a lower secondary education), medium education (upper secondary or post-secondary non-tertiary education) and high education (tertiary education, used as the reference category).

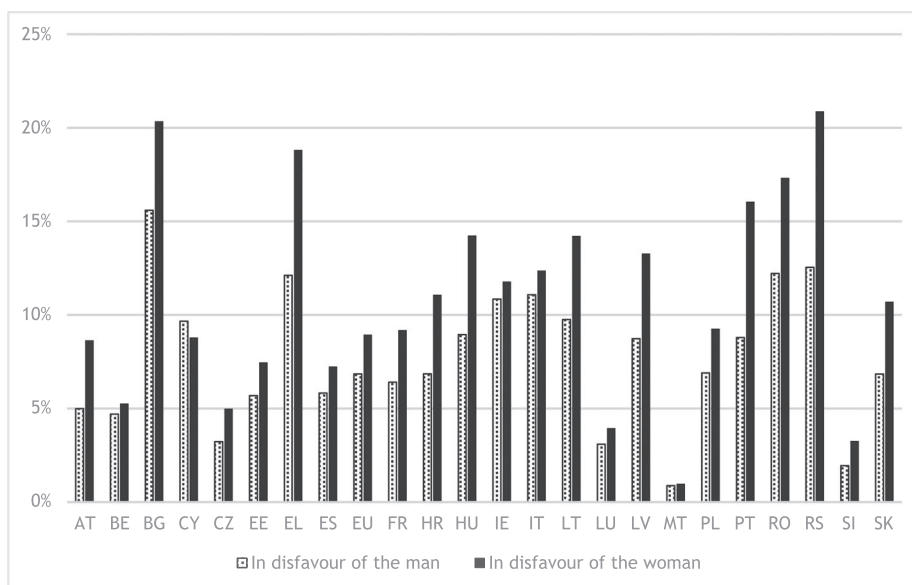


Figure 6. Percentage of couples where the woman/man suffers from more deprivations than her/his partner, by country, 2015

Note: See Figure A2 in annex for the 95% confidence intervals of the difference between the proportions in disfavor of the woman and the proportion in disfavor of the man.

Source: EU-SILC 2015 cross-sectional data, authors' computation.

- Housing costs overburden;⁷
- Debt overburden;⁸
- Difficulties in making ends meet;
- Work attachment of partners;⁹
- Health problems (at least one partner having limitation in daily activities);
- Number of dependent children.

Independent variables in the substantive regressions (deprivation gap at the disadvantage of the woman/the man) include:

- Mode of data collection (CAPI: Computer-assisted personal interviewing, CATI: Computer-assisted telephone interviewing, PAPI: paper-and-pencil interviewing; CAWI: Computer-assisted web interviewing or self-administered);

⁷A housing burden dummy measures if households' housing costs, including mortgage repayment (principal repayment and interest) or rent, insurance and service charges (sewage removal, refuse removal, regular maintenance, repairs and other charges) are a heavy burden (light or no housing burden as the category of reference).

⁸The debt burden of the household is a dummy indicating if payment of debts from hire purchases or loans other than mortgage or loan connected with the dwelling are considered as a heavy financial burden to the household.

⁹The partner is considered to be at work if he/she works part-time or full time; as employee or self-employed.

TABLE 4

ESTIMATES OF A SYSTEM OF THREE LOGISTIC REGRESSIONS EQUATIONS: DEPRIVATION OF THE COUPLES,
DEPRIVATION GAP AT THE DISADVANTAGE OF THE WOMAN, DEPRIVATION GAP AT THE DISADVANTAGE OF THE
MAN, MARGINAL EFFECTS, 2015

Probability that at least one partner lacks one item		
Parameter	Estimate	Pr > t
Intercept	4.04	<.0001
Log household income (PPS)	-0.53	<.0001
Both partners at work (ref)		
No partner at work	0.12	<.0001
Woman is the only partner at work	0.28	<.0001
Man is the only partner at work	0.18	<.0001
Highest age of the two partners	-0.01	<.0001
Health problems	0.20	<.0001
Difficulties in making ends meet	0.86	<.0001
Heavy housing costs overburden	0.24	<.0001
Heavy debt overburden	0.20	<.0001
Self-employment	-0.16	<.0001
High education (ref)		
Low education	0.22	<.0001
Medium education	0.22	<.0001
Number of children	-0.01	0.008
BE (ref)		
AT	0.51	<.0001
BG	0.72	<.0001
CY	-0.25	0.01
CZ	-0.50	<.0001
DE	0.39	<.0001
EE	0.16	0.06
EL	0.49	<.0001
ES	-0.19	<.0001
FR	0.23	<.0001
HR	-0.69	<.0001
HU	0.50	<.0001
IE	0.37	<.0001
IT	-0.07	0.02
LT	0.92	<.0001
LU	-0.58	0.00
LV	0.42	<.0001
MT	0.20	0.17
PL	-0.12	0.00
PT	-0.05	0.20
RO	0.95	<.0001
SI	-0.10	0.20
SK	0.01	0.84

Probability of a deprivation gap at the disadvantage of				
Parameter	The woman		The man	
	Est.	Sig.	Est.	Sig.
Intercept	-2.58	<.0001	-2.65	<.0001
Share of woman's income in the income of the couple	-0.51	<.0001	0.65	<.0001
Proxy interview for the woman	-0.17	<.0001	0.08	<.0001
Proxy interview for the man	0.01	0.56	-0.18	<.0001
Highest age of the two partners	0.00	0.00	0.00	0.00
Age difference between partners	0.00	0.84	0.00	0.95
Both partners at work (ref)				

TABLE 4 (CONTINUED)

Probability that at least one partner lacks one item				
Parameter	Estimate		Pr > t	
Woman is the only partner at work	0.04	0.10	0.23	<.0001
Man is the only partner at work	0.23	<.0001	0.07	0.02
No partner at work	0.03	0.20	0.02	0.43
Two adults no child (ref)				
Two adults one child	-0.03	0.25	-0.12	<.0001
Two adults two children	-0.02	0.52	-0.19	<.0001
Two adults three children or more	-0.08	0.01	-0.30	<.0001
More than two adults with children	-0.02	0.46	-0.12	<.0001
CAWI or self-administered (ref)				
PAPI	-0.08	0.05	-0.06	0.17
CAPI	-0.08	0.01	-0.01	0.77
CATI	-0.06	0.09	-0.02	0.57
At least one partner deprived	2.24	<.0001	1.90	<.0001
BE (ref)				
AT	0.28	<.0001	0.04	0.54
BG	0.23	0.00	-0.10	0.10
CY	-0.26	0.12	-0.16	0.32
CZ	0.04	0.63	-0.33	0.00
DE	0.12	0.04	-0.06	0.28
EE	0.21	0.14	0.18	0.19
EL	0.00	0.98	-0.13	0.05
ES	-0.26	<.0001	-0.15	0.00
FR	0.19	0.00	0.03	0.49
HR	0.05	0.61	-0.18	0.06
HU	0.05	0.38	-0.25	<.0001
IE	-0.08	0.50	0.20	0.05
IT	0.01	0.83	-0.03	0.50
LT	-0.06	0.52	-0.27	0.00
LU	-0.01	0.97	0.03	0.92
LV	0.06	0.54	-0.20	0.06
MT	-0.83	0.01	-0.56	0.08
PL	0.08	0.18	-0.07	0.23
PT	0.37	<.0001	-0.18	0.00
RO	-0.06	0.37	-0.23	0.00
SI	-0.75	<.0001	-0.95	<.0001
SK	0.04	0.67	-0.19	0.04

Source: EU-SILC 2015 cross-sectional data, authors' computation. Number of observations: 118,525. Weighted estimation.

- Use of proxy interview for an absent partner;¹⁰
- Highest age of the partners;
- Age difference between the male partner and the female partner;
- Work attachment of partners;
- Share of the personal female income in the total personal income of both partners;
- Household type;
- Country fixed effects.

¹⁰The person who replies for the absent person is not necessarily his/her partner but can be another adult in the household.

Note that our sample includes complex households, in which the couple lives together with other adults. A sensitivity analysis excluding these households did not alter our conclusions.

In the first equation, the probability that at least one partner lacks one or more items decreases with the income level, the presence of self-employed persons and the educational attainment. It increases with the level of financial difficulties and overburden problems (housing costs, debts) in the household, and with the number of children. Compared to couples where both partners work, those in which only one partner works (woman or man), or in which no partner works, suffer from a higher risk of deprivation. Despite the fact that differences in household income are measured in purchasing power standards, some country fixed effect are significant.

The second equation models the probability that the woman suffers from a higher number of deprivations than the man (as compared with the probability of no gap or a gap at the disadvantage of the man). The third equation explains the probability that the man suffers from a higher number of deprivations than the woman (as compared with the probability of no gap or a gap at the disadvantage of the woman). The two models in a way mirror each other, which is reflected in the estimated coefficients.

Our results show that the use of proxy interviews has an impact on the gender deprivation gap: when the woman/man is not available to reply to the questionnaire and is replaced by another household member, this decreases the probability of the deprivation gap to her/his disadvantage and increases the probability of a deprivation gap to the disadvantage of the partner. This suggests that either the adult replying to the questionnaire minimises the deprivation status of the absent partner or interprets differently her/his deprivation situation. The odds ratios are identical for men and women. This is an important result, which has implications for data collection. Also, the mode of interviewing has an impact, with self-administered and CAWI questionnaires leading to a larger gap (for women). The lack of privacy of some modes of interviewing may indeed decrease the declared level of deprivation of the deprived partner.

As regards demographic variables, the results show that the presence of children is associated with a smaller risk of a deprivation gap for both women (only for large families) and men (all families with children). Perhaps the presence of children induces partners in a couple to pool and spend their resources jointly (see Daly and Kelly, 2015, for similar findings). This finding contrasts with those by Cantillon *et al.* (2015), who found that the presence and number of children had a stronger effect on individual deprivation for women than for men. The partners' ages and their difference has a positive but marginal effect.

We find that the deprivation status of the couple (which equals one when at least one adult suffers from one item) increases the deprivation gap (for woman and man). The work attachment of wives and husbands has a symmetrical impact on the gender differences in deprivation in the sense that when a partner is at work, while the other is not, this increases the risk of a gender deprivation gap, with a higher impact on the gap to his or her partner's disadvantage. Couples in which no partner works and those in which both work do not differ from each other. Finally, the share of female income in the couple's income (which groups together the personal income of both partners but does not include other household income

components which may be linked to children, wealth or other household members' income) has an impact on the deprivation gap. The higher the share of the couple's income that the woman has, the higher the probability that the deprivation gap disadvantages her man rather than herself.

Many country fixed effects remain significant when other explanatory variables are taken into account (including mode of interviewing). Malta and Slovenia appear as outliers, with a significantly smaller level of gap, as already pointed out. Cyprus and Spain also show lower gaps. Relatively high effects at the disadvantage of women are registered for Portugal, Austria, Bulgaria, Estonia, Austria and France.

Could the differences between countries that are not explained by individual characteristics, as revealed by the country effects in Table 4, be due to the variation across countries in the extent of income pooling within couples? To approach this question, we rely on the results of the analysis by Ponthieux (2017), using the special module of EU-SILC 2010. She combines the answers of both partners to the questions about income pooling into a single variable, measuring the pooling regime of the couple (full pooling, partial pooling or no pooling). In Figure 7, we plot the country fixed effect on the woman's deprivation gap and the proportion of all couples having a full pooling regime.¹¹ Clearly, there is no relationship between these variables. Though this evidence is only suggestive, it confirms our conclusion from the literature review, that there is no straightforward relationship between the way couples manage their finances and differences in deprivation within couples.

6. DISCUSSION AND CONCLUSIONS

This paper highlights the value of opening the “black box” of the intra-household distribution of goods and services by looking at individual differences in deprivation. In conventional analyses of poverty and deprivation based on the household level, partners in a couple are assumed to have an equal living standard. But our results show that within couples, the deprivation level differs between partners in a non-negligible number of cases in a range of European countries.

We analyzed EU-SILC data from the 2015 wave, which contain six deprivation items at the individual level. The proportion of couples in which the partners gave diverging answers is limited for items such as clothes (7 percent) and shoes (3 percent), but much higher for items such as leisure (19 percent) and pocket money (13 percent). In these couples, the partners do not provide the same reply to the three-option questions. Once we regroup answer categories to define the enforced lack concept (so merging lack for other reasons with having the item), the number of couples in which there is a one-sided enforced lack (i.e. where one partner does not have the item because she/he cannot afford it, and the other has it, or does not have it for other reasons) is much more limited, ranging from 2 percent for shoes to 7 percent for leisure and pocket money. Divergence depends on the proportion of people lacking the item, as there can be no divergence when people have the item: this explains to a certain extent differences between items and countries. Furthermore, divergence

¹¹Since the pooling regime data are from EU-SILC 2010, we make the implicit assumption that the pooling regime is a fairly stable characteristic.

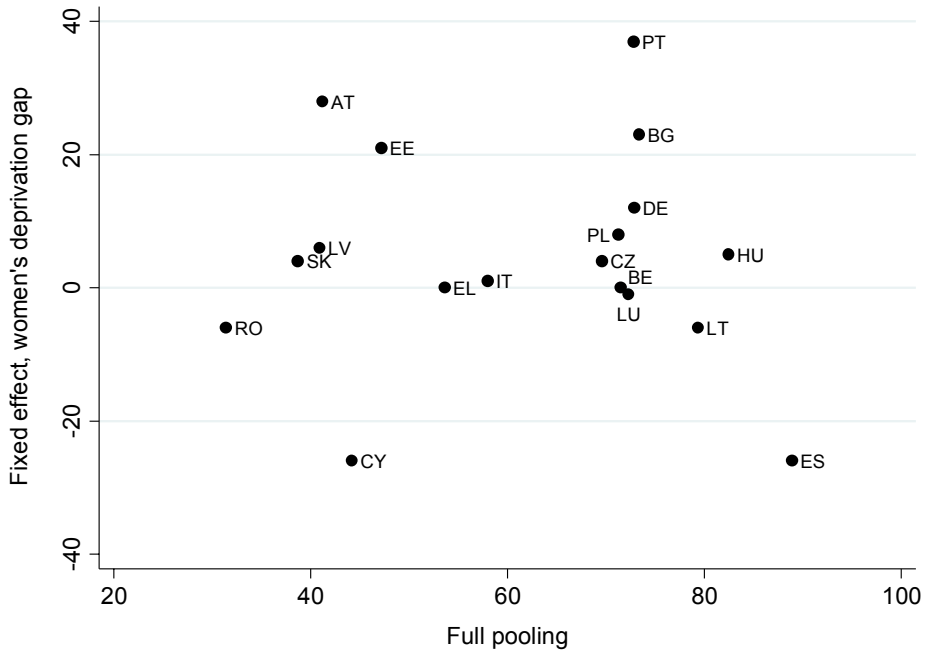


Figure 7. Country fixed effects on the deprivation gap of women and degree of income pooling within couples

Note: For details how the country fixed effects are estimated, see Table 4 and text. FR, HR, IE and SI not shown, because no data are available for these countries on income pooling. MT left out, because the country fixed effect for MT is an outlier.

Source: Ponthieux (2017), Table 9.2; and EU-SILC 2015 cross-sectional data, authors' computation. [Colour figure can be viewed at wileyonlinelibrary.com]

can be to the disadvantage of the man or of the woman. For all items except access to the internet, the gender difference, though generally small, is significant and to the disadvantage of women. At the EU level, the difference ranges from 0.2 percent for shoes to 1.9 percent for pocket money, but it is larger in some countries.

When aggregating lack on the level of items into a deprivation scale for adults, and considering the difference between the scores on this scale of partners within couples, we find that there is no difference in 84 percent of all couples (in fact, 59 percent of all couples do not suffer from any enforced lack of the six items, so a deprivation gap cannot appear). Where it is different from zero, the intra-couple gender deprivation gap can go in two different directions, but the situation in which the number of enforced lacks is higher for the woman (9.2 percent of all couples) occurs more often than that in which the man is disadvantaged (6.5 percent).

Our analysis therefore confirms previous studies. In a large majority of couples, no imbalance in deprivation is apparent, mainly because both partners do not lack any item. Focusing on those couples in which at least one item is lacked by one partner, the proportion of diverging couples is substantial. It is larger than 40 percent in all countries (except Malta and Slovenia, which appear as outliers in our analysis and warrant further investigation). However, the percentage in which the woman is the disadvantaged partner is close to the proportion of couples in which

the man is in this situation. Yet, there is clear evidence that the intra-couple gender deprivation gap is systematically biased to the disadvantage of women.

As we emphasized in the literature review, one should be careful in drawing inferences from these findings on the intra-couple gender deprivation gap for the intra-couple distribution of economic resources. For individual couples, a gender deprivation gap can occur for a number of reasons, even though the partners have equal or equivalent access to resources. However, the finding that the distribution of the gender deprivation gap is systematically skewed to the detriment of women, is an indication that deviations from an equal distribution of resources within couples disadvantage women more often than men. Conversely, the absence of a gender deprivation gap does not indicate that the intra-couple distribution of resources is equal or equitable. In a couple with a sufficiently high though unequally shared income, the partner who gets the lesser share may still have sufficient resources to escape deprivation. In other words, not finding an intra-couple deprivation gap does not constitute evidence that there is no inequality in the distribution of resources within couples. It would therefore be wrong to conclude that there is more intra-couple inequality in a wider sense in the countries where we find a large proportion of couples where the gender-deprivation gap is to the detriment of the woman or the man. Unfortunately there are at present no good cross-country data on intra-couple inequality to corroborate this (see also Ponthieux, 2017).

As did earlier studies, we find that the work status of the partners and their share of joint income are important determinants of the intra-couple gender deprivation gap. A larger share of income for the female partner is associated with a smaller probability of a deprivation gap to her disadvantage, and a higher chance that her partner has a higher deprivation score than she has. The work attachment of wives and husbands has a symmetrical impact on the gender differences in enforced deprivation in the sense that when a partner is in paid employment, while the other is not, this reduces the risk of a gender deprivation gap to his or her disadvantage, while increasing it for the other partner.

The results of the multivariate analysis also suggest that national differences were not fully explained by the model and may be due to idiosyncratic factors. No relationship was found between these national differences, and the popularity of the full pooling regime among couples.

As the quality of the data is crucial to present a correct picture of the gender deprivation gap within couples at the EU level, there are a number of issues that need to be addressed in terms of data collection, before definitive conclusions can be drawn. First, in some countries the data are not available on the individual level for all the adults who compose the household, either because the information was collected only at the household level (UK) or because only one respondent per household (the “selected respondent”) was interviewed (DK, FI, NL, SE). It is particularly regrettable that no Scandinavian country could be included. In future, individual information on personal deprivation should be collected in all EU countries to allow national comparisons and comparable measurement. Also, among the countries for which individual information is available, some deviate strongly from the general pattern. Compared to the other countries, the number of diverging couples is extremely low in Malta and Slovenia. This deserves further investigation.

Second, our results show that the use of proxy interviews has an impact on the deprivation status of the (absent) person in some countries. When the woman/man is not available to reply to the questionnaire and is replaced by another household member, this decreases the probability that disadvantage vis-à-vis her/his partner is observed. This suggests that either the adult replying to her questionnaire minimizes the deprivation status of the absent partner or that they interpret differently their deprivation situation. In view of the relatively high percentage of proxy interviews (which furthermore varies by gender and across countries), we think that Eurostat should provide clear guidance for the use of proxies for future data collection. The only country which did not use proxies for collecting data on material deprivation among adults has an extremely high percentage of missing values (29 percent, in Ireland).

A final issue is that the presence of the partner or of other household member(s) during the interview may have an effect on the replies provided.¹² Indeed, divergence in living standards within couples is a sensitive issue. Ideally, each member aged more than 15 years should be surveyed on his/her own (see Cantillon and Nolan, 1998, 2001) and proxy interviews should be avoided for such questions.

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¹²For empirical evidence of the impact of gender norms on the answers to survey questions, see Roth and Slotwinski (2018).

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SUPPORTING INFORMATION

Additional supporting information may be found in the online version of this article at the publisher’s web site:

Table A.1. Sample sizes.

Table A.2. Confidence intervals for the differences presented in Table 3.

Figure A.1. Distribution of couples by level of deprivation gap, EU pooled data, 2015 (percentages).

Figure A.2. Difference in the percentage of couples where the woman suffers from more deprivations than her partner and the percentage of couples where the man suffers from more deprivations than his partner (the difference is positive when women are more often disadvantaged), 95% confidence intervals, by country, 2015.