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Does it pay to say "I do"? Marriage bonuses and penalties across the EU

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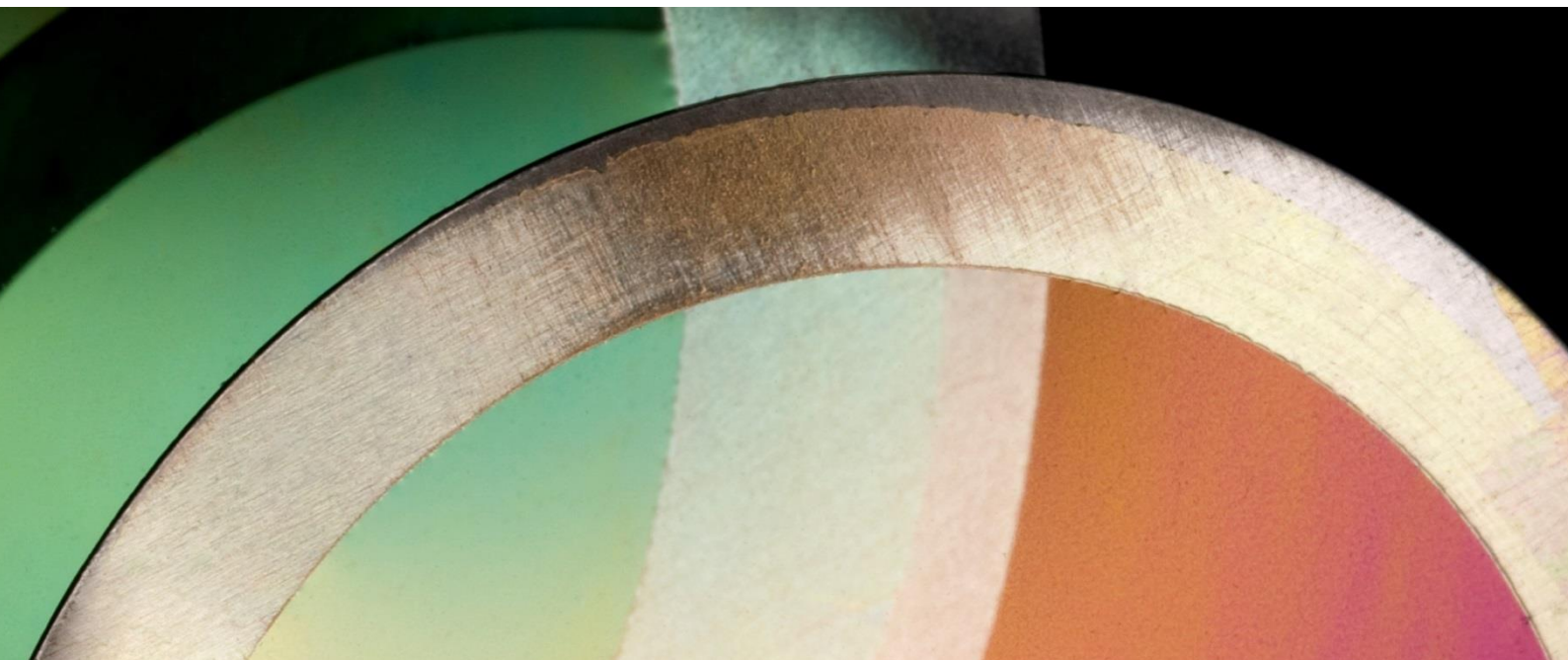


JRC TECHNICAL REPORT

Does it pay to say “I do”? Marriage bonuses and penalties across the EU

*JRC Working Papers on
Taxation and Structural
Reforms No 07/2021*

M. Christl, S. De Poli & V. Ivaškaitė-Tamošiūnė



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Executive Summary

- In most Western societies, household formation has changed rapidly over the past centuries. While the traditional form of marriage has been the dominant form of family households for decades, cohabitation is on the rise in many countries. However, tax-benefit systems often treat married couples and cohabiting partners differently.
- We analyse this unequal treatment of marriage and cohabitation within the tax-benefit systems of the EU Member States using EUROMOD, the tax-benefit model of the European Union. EUROMOD is a unique tool for cross-country comparative analysis and allows for simulations of tax liabilities and entitlements to benefits in all EU Member States.
- In the majority of EU Member States, being married does not bring substantial financial gains or losses for a couple. However, for several countries we find significant differences, mainly stemming from personal income taxation rules that either assess incomes jointly or apply marriage-related allowances or credits.
- A *marriage bonus* indicates a situation when a couple is financially better off if married rather than cohabiting. We find substantial differences in countries such as Luxembourg, Germany, Ireland, Poland and Belgium.
- On the contrary, a *marriage penalty* suggests that a married couple, on average, would have been better off if were cohabiting. In countries such as Cyprus, Malta and Greece, on average, married couples face a reduction in their disposable income because of a reduction in means-tested benefits and pensions.
- We find substantial differences in the size of the marriage bonus not only across countries but also within countries across different household types. In countries with marriage bonuses, single-earner households or two-earner households with substantial difference in earnings within a couple typically receive a higher marriage bonus. In countries with the marriage penalty, the elderly households are the most affected.
- From a policy-maker's point of view, we highlight the budgetary costs that come along with changing the existing rules in some EU countries. Applying the same policy rules to cohabiting couples that exist for married people would make cohabiting couples financially better-off but would result in a substantial reduction in revenues for governments. On the other hand, abolishing the marriage-related tax-benefit components would lead to income losses for married couples but would

result in increased government revenues that could be spent to targeted support of specific groups.

- Our results point to important policy implications. The unequal treatment of couples depending on their civil status does not only violate horizontal and vertical equity principals, it also raises questions about gender equality. Especially joint taxation and tax-related allowances/credits, which are one of the main drivers of marriage bonuses, might disincentivize second earners, which are mostly married women, from accessing the labour market. Therefore, this unequal fiscal treatment potentially has an impact on reallocation of paid and unpaid work within a family.
- The results, however, should be interpreted with caution as they provide a static assessment of the different treatment of cohabiting and married couples within countries' tax-benefit systems without any behavioural reactions. That is, we cannot draw any conclusion on whether a particular tax-benefit system encourages people to marry or if there were behavioural changes because of the changes in the taxation or in social benefits' eligibility rules. Please also note, that the simulated impact is limited to the policies or their components that can be included and are modelled in EUROMOD microsimulation model (e.g. marriage bonuses stemming from survivor pensions or specific old-age pension rules that take into account civil status of a married couple, cannot be simulated).

Does it pay to say “I do”?

Marriage bonuses and penalties across the EU

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Abstract

We analyse the different fiscal treatment of married and cohabiting couples across all EU Member States using microsimulation methods. Our paper highlights important differences across EU countries' tax-benefit systems, where seven countries show substantial bonuses for married couples and four exhibit marriage penalties. On a micro level, we find that these marriage bonuses/penalties differ substantially across household types and income. From a policy point of view, our results suggest that the abolishment of marriage-related tax-benefit components in countries with marriage bonuses would leave some households financially worse off but would increase governments revenues that could be spent to targeted support of specific groups. From both an equity and a gender equality point of view, this abolishment would be desirable.

JEL-Code: H31, J12, J18

Keywords: marriage, cohabitation, marriage penalty, inequality, tax-benefit systems, Europe

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The findings, interpretations and conclusions expressed in this paper are entirely those of the authors. They should not be attributed to the European Commission. Any mistakes and all interpretations are the authors and theirs only. The authors are grateful for the helpful comments from Salvador Barrios, Wouter Van der Wielen and María Teresa Álvarez Martínez. We are indebted to the many people who have contributed to the development of EUROMOD, especially to the EUROMOD team at JRC Seville.

1. Introduction

In most Western societies, household formation has changed rapidly over the past centuries. While the traditional form of marriage has been the dominant form of family households for decades, cohabitation is on the rise in many countries. However, tax-benefit systems often treat married couples and cohabiting partners differently. While there is extensive literature on the US related to the marriage bonus and its consequences on income and family formation, research on the unequal treatment of married and cohabiting couples within the tax-benefit systems of the European countries is scarce. This paper aims to fill this gap in the literature, investigating the extent of the unequal treatment between cohabiting and married couples in the EU countries.

We use EUROMOD, the microsimulation model of the European Union. It is based on EU-SILC (European Union Statistics on Income and Living Conditions) microdata and allows for the comprehensive assessment of unequal treatment between married and cohabiting couples across all EU countries, ensuring also cross-country comparability. On a micro level, we calculate the impact of the civil status (married or in cohabitation) on the fiscal situation of each household following the current tax and benefit rules. This allows us to estimate the marriage bonus or penalty for each household in the EU-SILC data.

In this paper, we try to answer several questions. First, we give a cross-country overview of the treatment of marriage within the tax-benefit system. We show that in many European countries being in wedlock does not give any sizable financial advantages. However, there are some countries that treat couples differently based on their civil status, which is often related to taxation. Most of the tax-benefit systems that treat married and cohabiting couples differently favour marriage (marriage bonus), meaning that a couple is financially better off if married. This is the case in Luxembourg, Germany, Ireland, Poland, Belgium, Spain and Czechia. On the other hand, for Italy, Greece, Malta and Cyprus, we find that cohabitation offers several advantages to cohabiting couples mainly by means-tested benefits or pensions.

Second, we use micro data to analyse the marriage bonus/penalty on a micro level. We show that in most countries the marriage bonus is strongly related to the labour market status of an individual's spouse and the difference in a couple's earnings. One-earner households, as well as households with very different level of incomes between partners, are strongly favoured by the tax-benefit systems in countries with a marriage bonus. This results in the commonly known problem of incentivizing the second earner in a married couple to reduce or give up work.

Third, we estimate the costs and distributional impact of unequal treatment. We show that offsetting unequal treatment will be complicated in practice. Applying the same rules for all couples will either lead to a substantial reduction in revenues for governments or to a substantial loss in income for married or cohabiting households, depending on whether there is a bonus or a penalty, making reforms towards equal treatment complex.

We contribute to the literature in several ways. First, we are to our best knowledge the first to analyse the unequal treatment of married and cohabiting (but not in a legal partnership) couples across all EU Member States in a comprehensive way. Second, we show that this unequal treatment not only differs substantially across countries, but also within countries (by household type).

Our results point to important policy implications. The unequal treatment of couples depending on their civil status does not only violate several equity principals, such as horizontal and verti-

cal equity, it also raises questions about gender equality. Especially joint taxation and tax-related allowances/credits (one of the main drivers of marriage bonuses) might disincentivize second earners, which are mostly married women, from accessing the labour market. Therefore, this unequal fiscal treatment potentially has an impact on reallocation of paid and unpaid work within a family.

The paper is structured as follows: Section 2 provides an overview of the related literature; Section 3 describes the data as well as the methodology used for the analysis; results are presented in Section 4; Section 5 discusses the results and the policy implications. In Section 6, we summarize and conclude.

2. Literature

While the general trend has been an increasing number of single households in Europe, also the composition of couple households has changed substantially over the last decades. While in former times, couples were often married, the number of cohabiting couples is on the rise. [Perelli-Harris and Gassen \(2012\)](#) discuss the increase in cohabiting couples in the past few decades in Western Europe and give an overview of the legal framework in Western European countries. Additionally, [Blau and Van der Klaauw \(2013\)](#) and [Lundberg and Pollak \(2013\)](#) provide an overview of the changes in family structures in the US over the recent decades.

The traditional married family often enjoys advantages over other family forms. The general tax structure and other tax-benefit components deliberately or unconsciously contribute to patterns of work, marriage, household formation, childbearing, unpaid labour division at home and more (see, e.g., [McCaffery \(2009\)](#)). Among other functions, taxation enacts a social function which is meant to redistribute incomes, but at the same time it modifies the social stratification, for example, by protecting vulnerable groups in society or encouraging specific individuals' behaviour. Marriage formation can well be encouraged by taxation in the form of tax rebates or specific spouse-related allowances (see, e.g., [Leroy \(2008\)](#) and [Sainsbury \(1999\)](#)). In many respects, this "social engineering" by fiscal policies is the representation of social norms and values that exist in a society, and, at the same time, it further perpetuates those norms by continually applying unequal treatment within the fiscal systems (as shown, e.g., by [Stotsky \(1996\)](#) and [Elson \(2006\)](#)).

From the welfare state point of view, different tax treatment of particular groups by offering tax advantages or privileges hint to a hidden or invisible welfare state (see, e.g., [Martin \(2020\)](#), [Sinfield and Greve \(2013\)](#) and [Greve \(1994\)](#)). The idea that taxes have not only a revenue raising function but also a social policy function is not new. Richard Titmus was the first to explicitly use the term fiscal welfare: tax allowances, tax credits, reduced tax rates and tax exemptions are in essence savings for the individual and, despite difference in the administrative method, are effectively transfer payments ([Titmuss, 1958](#)).¹ However the social function of tax reliefs has often been overlooked in welfare state analysis.² Moreover, tax breaks offered to married people are deemed not to deviate from the standard system in many countries ([Adema et al., 2011](#)). As [Sinfield \(2012\)](#)

¹The term tax expenditure usually indicates the cost in lost revenue resulting from tax reliefs ([Sinfield, 2012](#)).

²By only looking at social benefits or other provisions that are traditionally narrowly associated with social policy, comparison of countries might be misleading (see, e.g., [Ruane et al. \(2020\)](#)). For example, the existence of joint taxation might contribute to the concept of familialization, which increases an individual's dependency on family. These tax privileges or tax expenditures can be quantified and their redistributive capacity analysed by comparing

nicely states, “the recognition of marriage and family is so institutionalised in many countries that reliefs are part of the benchmark system and so not regarded as tax expenditures”³.

The different tax treatment of married couples is well known in the literature, at least regarding the negative incentive effects of such tax systems. [Bick and Fuchs-Schündeln \(2017\)](#), for example, quantify the negative labour supply effects of joint taxation (typically a main source of the marriage bonus) for 17 European countries and the US. [Kabatek et al. \(2014\)](#) show that for France, the change from joint to individual taxation would increase female labour supply substantially, while male labour supply would fall. Similarly, [Crossley and Jeon \(2007\)](#) find positive effects on female labour market participation of reform that reduces the jointness of the income taxation in Canada.

Additionally, the existence of marriage bonuses or penalties, meaning that couples can be financially better or worse off by being married, raises the question of whether financial (dis)incentives matter for the marriage decision of a couple. There has been a considerable amount of research analyzing how fiscal benefits affect marriage decisions. (see, e.g., [Alm and Whittington \(1997\)](#), [Alm and Whittington \(1999\)](#), [Alm et al. \(1999\)](#), [Fink \(2020\)](#), [Fisher \(2013\)](#) or [Michelmore \(2018\)](#)).

While behavioural effects, both on the labour market and on the decision to marry, are out of the scope of our paper, the information on the size and heterogeneity across households of the marriage bonus/penalty in the EU countries offers important insights into the tax-benefit systems and opens new areas for research in this field. So far, relatively few studies have focused on cross-country analyses of marriage bonuses using a microsimulation approach. A study by [O’Donoghue and Sutherland \(1998\)](#) focuses on 15 EU countries, but in their analysis they account for not only marriage but also the presence of children. Similarly, [Immervoll et al. \(2009\)](#) analyse marriage bonuses and penalties in 15 Member States using the EUROMOD microsimulation model, but by focusing only on a number of hypothetical households. In addition, they assess the labour supply effects, pointing to high taxation of secondary earners.

In our paper, we focus only on the different tax-benefit treatment of married versus non-married couples without assessing the impact of other family-related fiscal instruments that do not differ across marriage status, such as children tax allowances.

3. Marriage-related components of tax-benefit systems

Tax and benefit systems in the EU and the UK are highly varied. Without going into depth of each country’s peculiarities, we focus on the elements within tax and benefit systems that are explicitly related to the marital condition. It is important to note that we separate two seemingly similar concepts related to the taxation. We draw a line between family-based taxation and marriage-based taxation. Supporting children or other dependents through the tax system is reasonable since they represent additional needs and expenses for a family. This is opposite of providing financial bonuses based on a mere marriage fact, which does not entail any specific needs nor additional expenses.

Table 1 summarises personal tax systems in the EU and the UK, indicating whether they treat earned incomes of married couples individually or jointly. Even if incomes are taxed individually,

them with assumed counterfactuals without tax rebates (see, e.g., [Barrios et al. \(2019\)](#) on pension expenditures and [Barrios et al. \(2020\)](#) on health, education and housing expenditures).

³see [Sinfield \(2012\)](#), page 24.

some countries might have additional spouse-related tax allowances or tax credits, which in the end gives an additional financial benefit to married couples. Finally, albeit incomes are taxed individually and there are no additional tax allowances or credits applied, some countries might allow some sort of transferability of either unused personal tax allowances or deductible expenditures between spouses. In the latter case, the financial gains are negligible. It has to be mentioned that in a few countries tax allowances/credits can combine both marriage-related and children-related conditions. For example, an additional allowance is given to a spouse only if the person is not working and has one or more children under a certain age.

In recent years, some countries have moved from joint to individualised personal income tax structures, or at least they allow married people to opt for an individual taxation⁴. However, in 2020, only four countries had strictly individual income taxation: Bulgaria, Sweden, Austria and Hungary⁵. Another six countries (Finland, Denmark, Lithuania, Greece, Cyprus and the UK) do not apply any tax allowances or credits for a spouse but allow a transfer of unused tax allowances/credits between spouses, and some expenses can be deducted from a partner's tax base/tax liabilities. In general, the financial benefits of being married in those countries are negligible. The biggest group of EU countries (Estonia, Latvia, Czechia, Slovakia, the Netherlands, Romania, Croatia, Slovenia, Italy and Spain) have individual tax systems but apply tax allowances or tax credits for a partner with little or no earnings⁶. Seven countries (Poland, Germany, Ireland, Belgium, Luxembourg, Malta and Portugal) have joint income assessments or the allocation of earnings between spouses.

⁴In Ireland, married couples were automatically jointly assessed before 2000 but could elect for single assessment. Since 2000, the income tax has been individualised, but married couples and civil partners may choose to be taxed jointly with a limit on the degree of transferability of income tax bands between spouses. In Luxembourg before 2018, married taxpayers were compulsorily taxed collectively with their spouses, but now married taxpayers can choose between either a pure individual taxation, an individual taxation with reallocation of income, or a collective taxation (as before 2018). In Estonia before 2017, a married couple also had an option to file a joint tax report, which was beneficial if one had unused tax allowances that they could share with their spouse. Since 2017, joint declarations were abolished, although a few tax allowances can still be shared between spouses. In the Netherlands, partners with low or zero taxable income may be entitled to tax credits depending on the income of a higher earning partner. Starting in 2009, the payment of the general tax credit to a spouse with a low or zero income is being reduced to zero in 15 years. In 2020, the payment of the general tax credit to a spouse with low or zero income was reduced by 80 percent comparing to 2009. Until 2013 in Slovakia, the only condition to get a spouse allowance was income below the basic tax allowance. Currently, it is also conditioned on taking care of small children, having a disability or the obligation to register at Labour office.

⁵In Austria and Hungary there are tax credits given to spouses (also cohabiting couples in Austria and parents in Hungary), and this is conditional on having children and, therefore, is not considered as marriage-related.

⁶Spain has individual taxation, but couples can file as individuals or use a joint tax return. In the case of joint taxation, incomes are pooled together, and the married couple is eligible for an additional tax allowance.

Table 1: Tax treatment of married couples across countries

Country	Income taxation	If individual, tax allowance/credit for spouse?	If individual + no tax allowance/credit for spouse, deductions shared together
AT	individual	No (single earners' tax credit)*	No
BE	individual (marital quotient applies**)		No
BG	individual	No	No
HR	individual	Yes (supported spouse allowance)	Yes (life insurance)
CY	individual	No	
CZ	individual	Yes (spouse tax credit)	
DK	individual	No	Yes (tax allowance can be shared; net capital income)
EE	individual	Yes (tax allowance for spouse)	
FI	individual	No	Yes (unused deficit tax credit can be transferred)
FR	joint		
DE	joint (can opt for individual)		
EL	individual	No	Yes (tax allowances can be shared)
HU	individual	No***	No
IE	individual (can opt for joint)		
IT	individual	Yes (dependent)	
LV	individual	Yes (dependent)****	
LT	individual	No	Yes (deductible expenses can be transferred)
LU	joint (can opt for individual)		
MT	joint or individual		
NL	individual	Yes (low/zero income), also for fiscal partners	
PL	joint or individual		
PT	joint (also for cohabiting couples, under conditions)		
RO	individual	Yes (dependant)	
SK	individual	Yes (dependant)*****	
SI	individual	Yes (dependant)	
ES	Individual, but can file tax returns jointly	Yes (couples can file individual or joint tax return that affects the additional tax allowance)	
SE	individual	No	No
UK	individual	No	Yes

Notes: *AT - Single earners' tax credit is paid to a spouse or a partner cohabiting at least 6 months. It is also conditional on having children. **BE - In the case of married couples, the tax legislator allows for income sharing between spouses up to a certain limit (the so-called "marital quotient system"). If one of the spouses earns less than 30% of the couple's total net taxable income, income between spouses is shared as if the higher earning spouse earned 70% of the total household income from professional activity and the other spouse earned 30%. The amount transferred is limited and may not exceed 30% of the total household professional income. After this income sharing, the rate structure is applied to both individuals as if the income was their own individual income. This implies that the transferred part of the income is taxed against a much lower marginal rate than if it had remained part of the income of the higher earning spouse. ***HU - Family tax credit can be shared among parents and is conditional on having children. Therefore, it could be also treated as a tax credit for children. ****LV - Non-working spouse allowance is applied if the spouse has a child below 3-years-old or the spouse has three or more children below 18-years-old. However, if a parent of the kids is not a spouse, this allowance cannot be granted for the other parent (different from AT and HU). *****SK - Spouse tax allowance can be deducted from the positive tax base of each taxpayer living with a spouse under one of following conditions: makes care of a child up to 3-years-old, receives a caring benefit, is disabled, or is registered unemployed at Labour office.

Source: EUROMOD Country Reports.

Usually, benefits do not differ by marital status in most EU countries as either benefits are meant to replace earnings (e.g. unemployment benefits), are categorical (e.g., benefits for children), or means-tested (where in most cases incomes of all household members are assessed). However, in some countries it is checked if a couple is married for the entitlements for the (means-tested) social benefits⁷. These benefits are more important in Cyprus, Malta, Greece and Italy and more so for elderly.

4. Data and methodology

Our analysis is based on EUROMOD, the microsimulation model for the European Union, which simulates taxes and benefits for the underlying population of each member state. EUROMOD is a unique tool for cross-country comparative analysis and allows for simulations of tax liabilities and entitlements to benefits.

As mentioned before, different treatment of cohabiting and married couples⁸ can stem from several components of the tax-benefit system. In countries with purely individual taxation, married couples are taxed as two different tax units, while in countries with joint taxation, the income of the two spouses is taxed jointly⁹. In some other countries the withholding of personal income tax is applied at the individual level, but additional allowances or tax credits can take into account the incomes (or expenditures) of a spouse. Some differences are also observed in relation to benefit entitlements, especially of means-tested benefits, such as family benefits and benefits for elderly people.

We define the marriage bonus MB_c of a couple c as the difference between the outcome of the tax-benefit function of a married couple t^m and the outcome of the tax-benefit function of a cohabiting couple t^{coh} :

$$MB_c = t_c^m(y_i, y_j, X_c) - t_c^{coh}(y_i, y_j, X_c) \quad (1)$$

The tax-benefit function of a couple $t_c(y_i, y_j, X_c \dots)$ (married or cohabiting) depends on the income of the individual y_i and the income of their partner y_j , as well as other characteristics of the couple X_c , such as children, age, labour market status and others. If MB_c is bigger than zero, couple c faces a marriage bonus, meaning that it is ceteris paribus financially better off in the case of marriage. If MB_c is smaller than zero, the couple is financially better off if cohabiting.

In our analysis, we make use of a microsimulation model EUROMOD to simulate changes in taxes and benefits in two hypothetical scenarios. In the first scenario, both married and cohabiting couples are defined as cohabiting. It means that all couples would be treated by the tax-benefit

⁷People with children living in couples might be still treated as lone parents by the tax and benefit system.

⁸Partners in legal partnership are treated as married in EUROMOD.

⁹In this context, Portugal is an exception because cohabiting couples who have been living together for at least two years may file their income taxes jointly. Since the advantage is quite big, we assume that all cohabiting partners opt for joint income taxation. This assumption is different from the one used in EUROMOD, where it is assumed that all cohabiting partners are opting for individual taxation.

system in the same way as non-married couples¹⁰:

$$t_c^{coh}(y_i, y_j, X_c, \dots) \forall c \quad (2)$$

In the second scenario, both married couples and cohabiting partners are considered as married. So all couples would be treated by the tax-benefit system in the same way as married couples:

$$t_c^m(y_i, y_j, X_c, \dots) \forall c \quad (3)$$

To simulate these two counterfactual scenarios, we first modify the input data, changing the marital status of couples living together. Then, using EUROMOD, we simulate the impact of the marital status on taxes and benefits in these two counterfactual scenarios and compare it to the current status.

Our analysis focuses on all components of tax-benefit systems that are simulated in EUROMOD, that is, direct taxes, social insurance contributions and cash benefits. However, there are a few fiscal components that are usually not simulated, and the value is taken directly from the underlying EU-SILC data. This is due to the lack of some information needed for the simulation¹¹. As an example, in many countries pensions are not simulated because of the lack of information on the contributory history. This is also the case of some minor benefits, such as disability benefits. In the rare cases that we are not able to simulate components of the tax-benefit system, we are also not able to cover potential differences in the treatment of married and cohabiting couples¹².

The analysis is based on the 2019 tax-benefit system using 2017 EU-SILC data. Upgrading factors are applied to monetary variables in order to represent 2019 data. For the purpose of our analysis, we divide the population into three subgroups: i) married couple households, ii) households with cohabiting partners and iii) single person households¹³. Figure 1 gives an overview of household composition for each country.

Cyprus, Greece, Poland and Croatia are the countries with the highest share of married couple households (around 63%). On the opposite side, we find Sweden and Estonia, where only 34% of the households are married couples, but the percentage of cohabiting partners is quite high. A high share of cohabiting partners is observed in Finland and in France as well, while in Greece, Croatia, Malta, Romania, Lithuania, Italy and Cyprus less than 5% of the households are composed of cohabiting partners who are not legally married. Finally, in Lithuania, Denmark and Estonia, more than half of the households are composed of only single persons. It is also worth mentioning that while the share of cohabiting couples is small, it has been increasing substantially over the last decades in Western Europe (see, e.g., [Perelli-Harris and Gassen \(2012\)](#)).

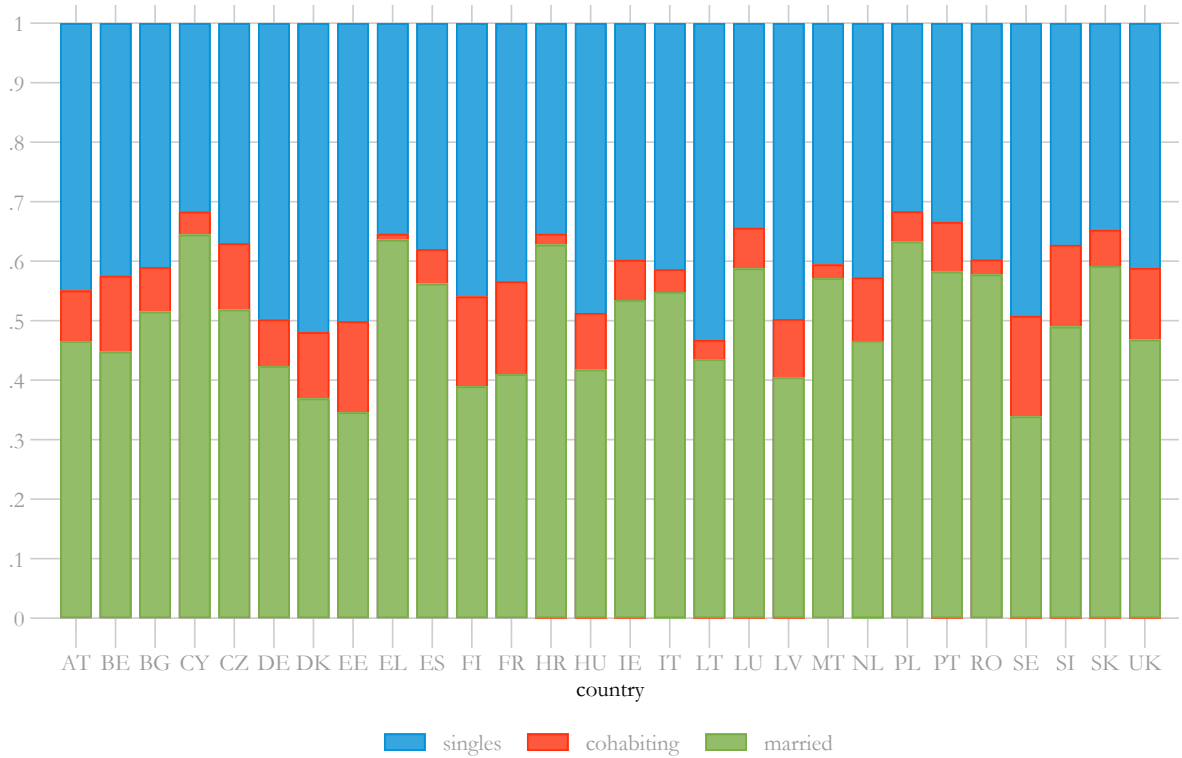
¹⁰Some countries have a legal framework for registering partnerships. For the aim of our analysis, we consider these couples as married.

¹¹See, e.g., [Sutherland and Figari \(2013\)](#)

¹²For example, in Slovenia there is a dependant tax allowance that is not simulated in EUROMOD, and, therefore, we do not see any effect in counterfactual scenarios.

¹³There are some households that belong to the first and the second group (with both a married couple and a cohabiting couple), but because of the very small share, we include these mixed households only in the first group. On average, in only 0.6% of households there are both married couples and cohabiting partners. The highest share of these mixed households is observed in Poland (1.6%).

Figure 1: Household structure in the EU



Note: EUROMOD estimations based on EU-SILC 2017; Households are divided in three groups: i) married, indicates households with at least a married couple, ii) cohabiting, indicates only couples, who are not legally married and iii) singles

5. Empirical results

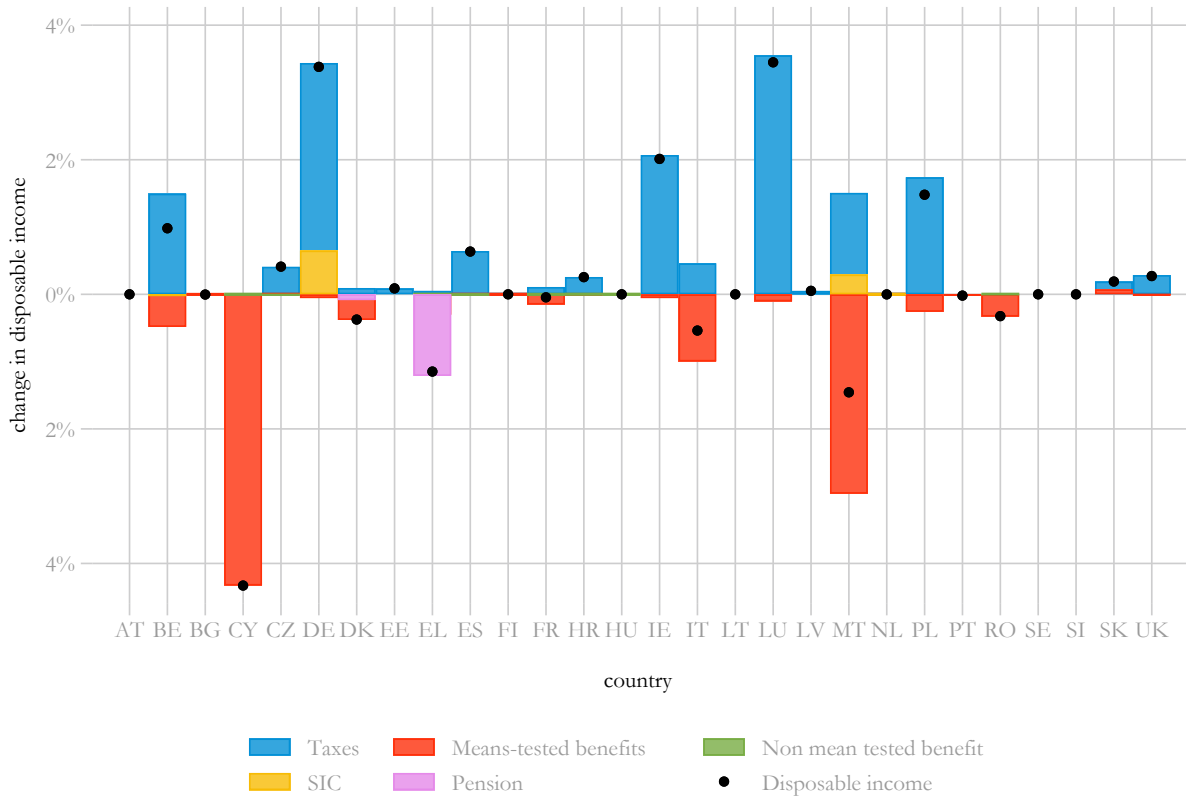
5.1. Marriage penalty or marriage bonus?

To identify the general size of the marriage bonus or penalty across countries, we identify the hypothetical situation in which all married couples would be treated as cohabiting couples and compare it to their current situation (Scenario 1). Figure 2 shows the impact of marriage on disposable income for the subsample of married couples. Additionally, the change in disposable income is decomposed into the main components of the tax-benefit system - taxes, pensions, social insurance contributions, as well as benefits (means tested and non-means tested).

We can see that in many countries, a couple is financially better off if married than if cohabiting due to different tax-benefit rules. We find substantial differences in countries such as Luxembourg, Germany, Ireland, Poland and Belgium. However, there are also some countries in which married couples would be, on average, better off if they would be cohabiting, indicating the existence of a marriage penalty.

Focusing on the source of the bonus/penalty, we see that the bonus is mainly driven by a reduction in taxes. This effect is particularly strong in countries with wage bonuses, and joint

Figure 2: Marriage bonus by income component (subsample married)



Note: EUROMOD estimations based on EU-SILC 2017

taxation can be identified as the main source for the wage bonus. However, in Germany and some other countries, other components of the tax-benefit system also lead to different treatment of married and cohabiting couples.

A different situation is observed in countries such as Cyprus, Malta and Greece, where marriage would lead to a penalty. On average, married couples face a reduction in their disposable income because of a reduction in means-tested benefits and pensions. Also in Belgium, there is a reduction in means-tested benefits because some married couples, due to higher net earnings, lose eligibility for income support.

In the rest of the paper, we will focus on the countries where the impact of marriage is economically relevant. Our analysis will therefore include the Member States where we find at least a 0.4% change in average disposable income due to marriage: Luxembourg, Ireland, Poland, Belgium, Germany, Spain, Czechia, Italy, Greece, Malta and Cyprus.

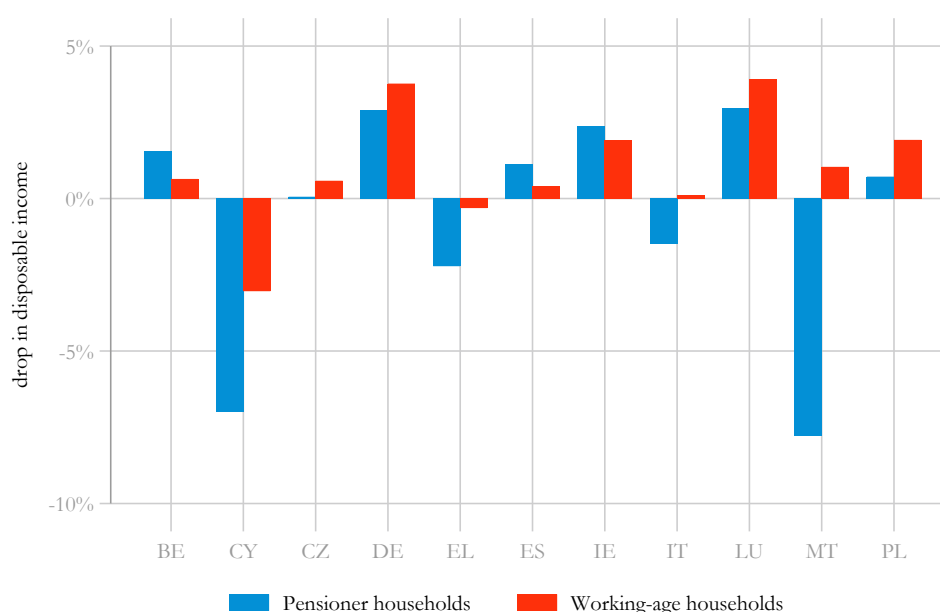
5.2. Who gains or loses by marriage

In this section, we look at the financial impact of marriage at the micro level and analyse which characteristics of couples are related to a higher or lower marriage bonus/penalty. In other words,

we analyse which households benefit more from marriage. Given that incentives might be different for the working age population versus pensioners, we first look at the marriage bonus/penalty separately for the two groups.

Interestingly, and as highlighted in Figure 3, we find that in Malta and Italy, couples of working age have positive incentives to marry, however, as soon as they retire, they face a marriage penalty. A similar pattern can also be observed in Cyprus and Greece, where the marriage penalty increases in pension age. In these four countries, the marriage penalty is driven by reduction in pensions or benefits targeted to elderly people.

Figure 3: Marriage bonus for pensioners and working-age households



Note: EUROMOD estimations based on EU-SILC data; Pensioner households include all couples with at least a partner older than 65 years-old or receiving pensions.

Among countries offering a marital bonus, pensioner households benefit more also in Belgium¹⁴, Spain and Ireland. However, in these countries, the effect is not driven by specific benefits targeted to elderly people. On the other hand, in Czechia, Germany, Luxembourg and Poland, working age couples have a higher marriage bonus than pensioner households.

The incentives for the working age population depends also on the presence of dependent children in the households, on the number of earners in the household or the wage gap between

¹⁴The effect for pensioners covers only those tax-benefit elements that are simulated in EUROMOD, but it cannot account for any marriage-related design of non-simulated components, for example, pensions. In Belgium, a married person can chose either to receive their own pension or opt for a pension that is calculated on the main earner's income by applying a higher coefficient.

the earners. To analyse incentives for married couples in the working age population, we set up a simple regression model where the dependent variable is the marriage bonus in euros to determine which characteristics are related to a higher or lower marriage bonus or penalty. Additionally, we exclude households in cases where there is more than one married couple and when both partners are not working. Table 2 shows the estimates of a regression model to analyse which couples would receive a higher marriage bonus. We control for the total market income of the household, and we can see that there is an inverted U-shape relationship between total household income and the marriage bonus.

Table 2: Regression results (marriage bonus)

	BE	DE	ES	IE	LU	PL	CZ	IT	EL	MT	CY
hh income (thd)	7.5*** (1.2)	22.6*** (1.4)	4.9*** (0.4)	3.1*** (0.6)	29.3*** (1.5)	25.1*** (1.1)	0.2 (0.6)	2.5*** (0.3)	0.1 (0.2)	25.3*** (2.3)	10.0*** (1.7)
hh income ^2 (thd)	-0.0*** (0.0)	-0.3*** (0.0)	-0.3*** (0.0)	-0.0*** (0.0)	-0.4*** (0.0)	-0.2*** (0.0)	-0.0 (0.0)	-0.0*** (0.0)	-0.0 (0.0)	-1.3*** (0.1)	-0.1** (0.0)
1 earner	35.6** (16.7)	15.7 (10.3)	31.3*** (1.9)	-0.0 (9.9)	67.2*** (21.3)	5.2 (11.6)	1,023.2*** (61.7)	34.8*** (2.4)	-3.0*** (1.2)	57.1*** (9.5)	-161.6*** (14.0)
share 2nd earner	-3.3*** (0.4)	-13.3*** (0.2)	-1.2*** (0.0)	-5.2*** (0.2)	-9.8*** (0.5)	-3.9*** (0.3)	-20.7*** (1.3)	-0.5*** (0.1)	-0.5*** (0.0)	-1.0*** (0.2)	3.9*** (0.3)
children	32.1*** (7.3)	-60.0*** (5.9)	-13.6*** (1.1)	14.3** (5.8)	-77.4*** (10.8)	115.7*** (5.3)	-116.9*** (28.4)	-27.2*** (1.3)	-6.3*** (0.6)	-5.1 (4.4)	28.4*** (6.9)
constant	57.6*** (17.5)	393.2*** (10.8)	26.7*** (2.0)	202.3*** (10.3)	311.7*** (22.8)	-11.9 (12.7)	802.8*** (67.2)	5.8** (2.6)	9.2*** (1.2)	-24.3** (11.1)	-230.1*** (14.1)
observations	1,240	3,139	4,580	1,297	1,577	4,231	2,110	5,453	6,424	1,318	1,522
R-squared	0.2	0.7	0.5	0.5	0.5	0.3	0.5	0.2	0.1	0.2	0.6

Our analysis also shows that the amount of the marriage bonus is strongly correlated with the labour market situation of the couple. In many countries (typically those with joint income taxation), the marriage bonus is significantly higher if only one person in the couple is employed. The opposite is observed in Greece and Cyprus, where there is individual taxation, and there are no tax credits/allowances for the spouse.

We also see a highly significant correlation with our earnings share variable¹⁵, which indicates that the difference in earnings within a couple household is an important determinant of the amount of the marriage bonus a household receives. In most countries, even if we control for the total income of the household, the bigger the difference in the earnings of the two household members, the higher the marriage bonus. This finding is not surprising given that in many countries the differences between individual and joint taxation is close to zero when both partners have similar earnings. Additionally, this indicates that marriage could incentivize the second earner to reduce the number of hours at work or to leave a job in order to reduce the total taxes paid. This result is in line with [Bick and Fuchs-Schündeln \(2017\)](#), who find that joint income taxation in Belgium and Germany generates negative labour supply incentives for married women, who are typically the second earners. Similarly, [Figari et al. \(2011\)](#) show that countries with joint taxation introduce substantial disadvantages through the tax-benefit system for women compared with their partners due to lower incentives to work more intensively.

Financial incentives to marry are also different for couples with children. Some couples with children might receive higher benefits when cohabiting because of the lone parent definition. In some countries (e.g., Luxembourg) parents not married are considered as lone parents for tax and benefits purposes. In general, the interpretation of this coefficients has to be made with caution because with this simple regression model we are not controlling for other variables that can affect eligibility to some benefits.

To analyse the exact amount of the marriage bonus, we make use of EUROMOD HHOT extension (see [Hufkens et al. \(2019\)](#)), which allows us to analyse hypothetical households given certain characteristics. For our analysis, we choose four different couple household types. We analyse the impact of the wage of one partner, keeping the wage of the other partner constant:

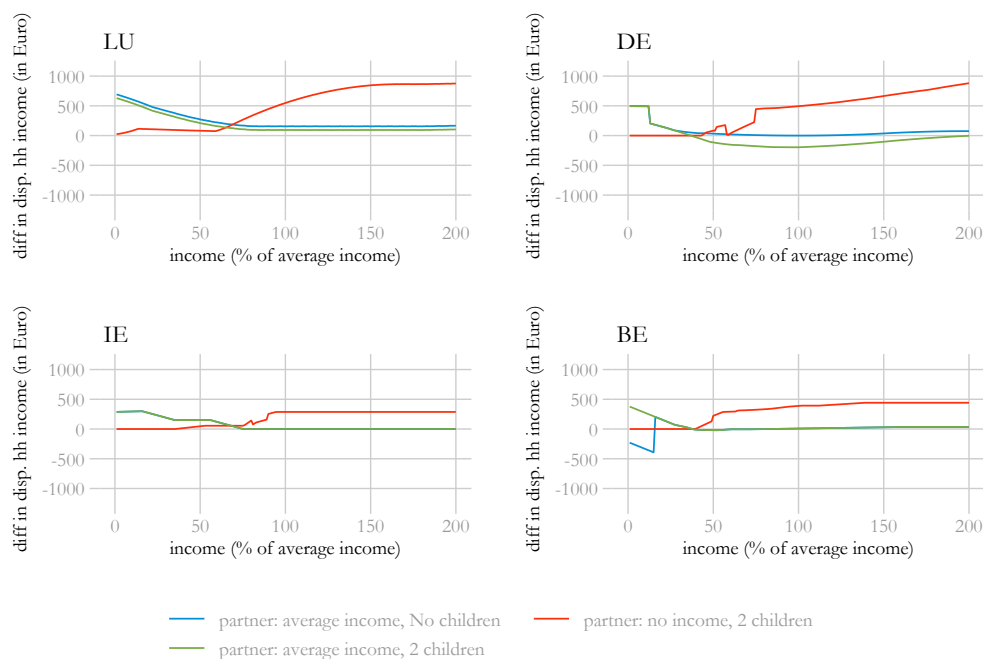
- Partner with average income, 2 children (green line)
- Partner with no income, 2 children (red line)
- Partner with average income, no children (blue line)

Figure 4 highlights the results of the marriage bonus in euros. In countries with joint income taxation, such as Luxembourg, Germany, Ireland and Belgium, especially single-earner couples benefit substantially from marriage, but it depends on the income of the single-earner (red line). We can see that the monthly bonus for high-income households can go up to almost 1000 euros per month in Luxembourg and Germany and up to 500 euros in Ireland and Belgium. For two-earner households (green and blue line), we can see that, as mentioned before, the marriage bonus is especially high if the differences in incomes are high. For Germany and Luxembourg, we also

¹⁵The share variable is the percentage of earnings of the second earner relative to the total earnings of the couple.

find some small differences in the case of the presence of children (difference between blue and green line).

Figure 4: Marriage bonus by income level and household type in euro I



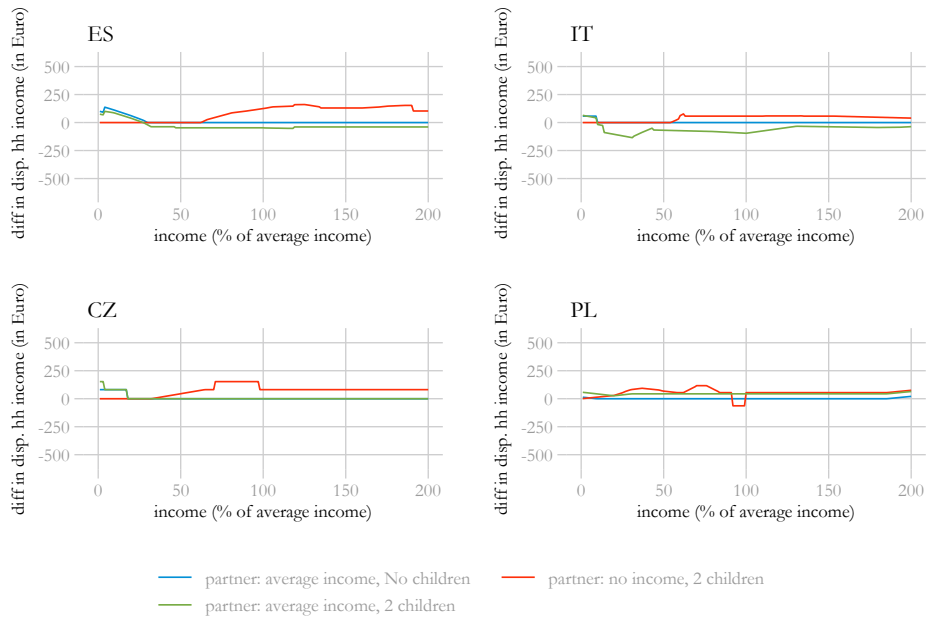
Note: EUROMOD estimations based on the Hypothetical Household Tool (HHoT)

As shown in Figure 5, the same effects (but lower) are observed in Poland (joint income taxation) and in Spain, Italy and Czechia, where taxation is at individual level but tax allowances or credits are applied for spouses with low income. These instruments lead to a lower marriage bonus for single-earner households (red line). However, the marriage bonus can reach almost 200 euro monthly in Spain and Czechia and about 60 euro in Italy and Poland. Again, for two-earner households (green and blue line), the amount of the bonus depends on the income share in the household. The bigger the difference in the income of the spouses, the higher the marriage bonus. Except for Czechia, the amount of the marriage bonus also depends on the presence of children. In Italy and Spain, the presence of children can even lead to a marriage penalty.

Looking at Figure 6, we can see similar patterns for Malta, where one can choose between individual or joint taxation. However, the picture looks quite different in Greece and Cyprus, where there is individual taxation, yet some deductions can be shared.

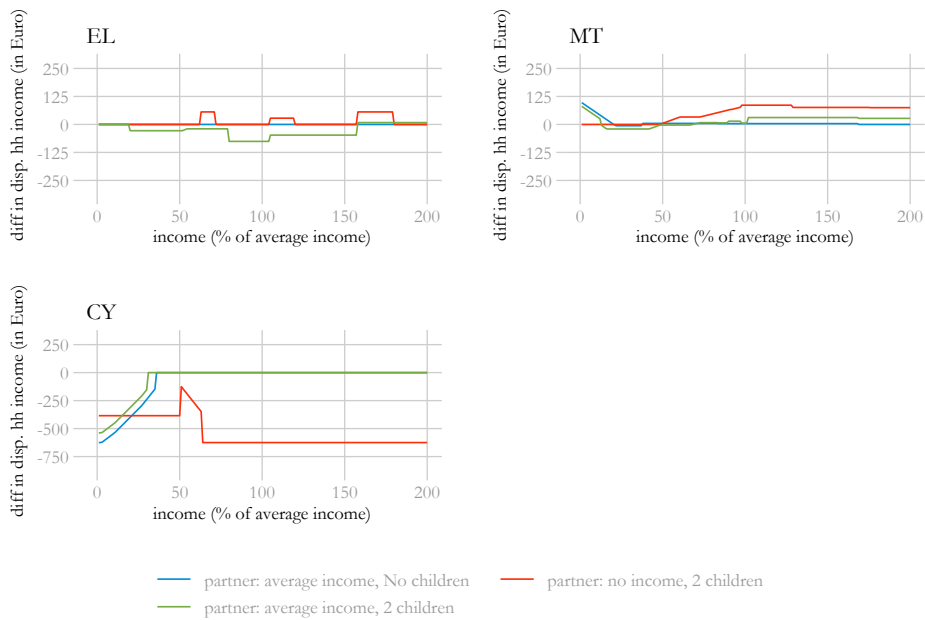
In Greece, depending on the income level, some single-earner households with children (red line) are financial better off if married. However, for two-earner households, we find a wage penalty in the presence of children (green line). For Cyprus, we find a strong marriage penalty for single-earner households (red line), mainly due to social assistance rules that differ by marital status. The same holds true for two-earner households where one partner has very low income.

Figure 5: Marriage bonus by income level and household type in euro II



Note: EUROMOD estimations based on the Hypothetical Household Tool (HHoT)

Figure 6: Marriage bonus by income level and household type in euro III



Note: EUROMOD estimations based on the Hypothetical Household Tool (HHoT)

5.3. The cost and distributional impact of unequal treatment

Our analysis highlights a different fiscal treatment for married and cohabiting partners. In some countries, married couples face lower taxes, while some others are subject to lower means-tested benefits. Table 3 presents the cost of equal treatment for the governments, that is, if all couples were treated as if they were not married or if marriage-related taxation and benefit rules would be enforced also for cohabiting partners. Given the higher number of married couples compared to cohabiting partners, the budgetary impact is larger if all couples were treated as not married. As expected, in countries with joint income taxation or where marriage-related tax allowances or credits exist, the governments would face a loss in their budget if they would apply the tax rules of married couples also to cohabiting couples. The opposite is observed in Cyprus, Greece, Italy and Malta, where due to a reduction in benefits that are related to means-tested benefits for pensioners, the impact on the government budget would be positive.

Table 3: Impact of equal treatment on government budgets (in million euro)

Country	All cohabiting		All married	
	in Mio. euro	in % of GDP	in Mio. euro	in % of GDP
BE	1,051	0.22%	- 13	0.00%
CY	- 332	-1.49%	8	0.04%
CZ	208	0.09%	- 69	-0.03%
DE	30,386	0.88%	- 1,952	-0.06%
EL	- 594	-0.32%	5	0.00%
ES	2,223	0.18%	- 86	-0.01%
IE	1,146	0.32%	- 119	-0.03%
IT	- 2,859	-0.16%	148	0.01%
LU	398	0.63%	- 17	-0.03%
MT	- 56	-0.42%	0	0.00%
PL	2,085	0.39%	- 214	-0.04%

Note: EUROMOD estimations based on EU-SILC 2017, GDP data from ESTAT.

If we treat married couples as if they were cohabiting, the opposite holds true. Most countries would increase their revenues substantially. For example, Germany would increase their revenues by almost 30 billion euros (0.88% of GDP), mostly driven by the effect of offsetting joint taxation. Our results highlight that, depending on the country, the impact of unequal treatment of couples depending on their marital status has a substantial impact on government budgets.

The implementation of an equal treatment for married and cohabiting partners would have a different impact on the income distribution across countries, as highlighted in Figure 7. If rules of married couples would be applied also to cohabiting partners (in blue), in Belgium, cohabiting partners especially in the second and third deciles would benefit and would experience a substantial increase in disposable income. In Germany and Spain, the positive impact would be mostly for couples in the low and medium part of the income distribution. A similar situation can be seen in Luxembourg and Ireland, where the impact is positive in all deciles, but mainly in the middle part of the income distribution. By contrast, in Cyprus and Malta, partners in the lower part of the income distribution would lose their income due to a reduction in means-tested benefits, in

particular for couples with children.¹⁶ This finding is in line with the paper by [Immervoll et al. \(2009\)](#), which shows that family-based transfers tend to create substantial marriage penalties at the bottom of the income distribution, which points to fairness and efficiency issues.

As expected, the opposite result is found if all couples are treated as not married, as highlighted in [Figure 7](#). In general, we observe a low effect on the first decile (with few exceptions), which is most likely related to a lower tax liability of the couples belonging to this decile and a stronger impact on households in the low-middle part of the income distribution. It is likely that in these deciles there are more one earner couples or couples with both persons employed but where the second earner has low income.

Given the lower number of cohabiting partners compared to married couples, it is also interesting to look at the impact on disposable income of the whole population. Depending not only on the specific design of the tax system (joint taxation) and the design of benefits related to marriage but also the location of married and cohabiting couples in the income distribution, equal treatment can have different effects on the income distribution. As shown in [Figure 8](#) in the Appendix, treating married couples as if they were not married would have a substantially stronger effect on disposable income. Some differences are also observed on the impact by deciles. In Germany for example, with exception of the first decile, households would lose about 2 to 2.5 percent in disposable income across the income distribution if married couples would be treated equally to cohabiting ones. This result is different from the one shown in [Figure 7](#), and it suggests that in the first decile there are few married couples. On the other hand, for Greece and Malta we find a stronger effect in the lower part of the income distribution because most of the married couples who receive means-tested benefits and pensions are located in the first deciles.

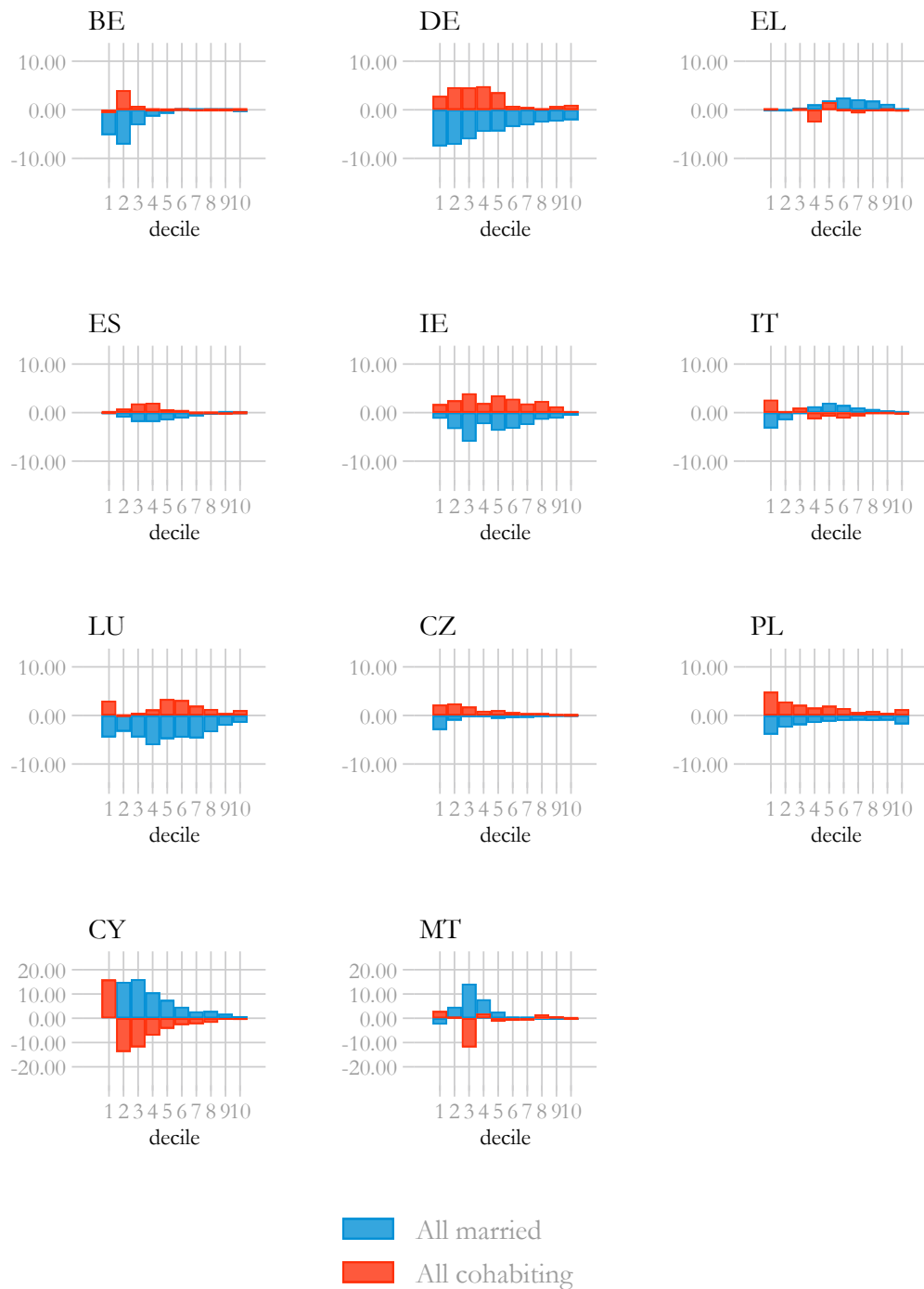
6. Discussion of results

Marriage may provide many non-financial (e.g., legal, psychological, cultural) benefits for those who decide to marry. However, marriage does not require any specific fiscal treatment by the state since being in wedlock - as opposed to being out of wedlock - does not create any additional financial needs. Therefore, any existence of financial advantages related to the marriage fact is difficult to justify. It is rather based on the old male-breadwinner model, where it was expected that husbands bring home the money and women stay at home doing all unpaid housework, including caring for children and the elderly. What does indeed create additional financial needs is the existence of children or dependant adults (elderly, disabled) in households. Since children are increasingly more often being born out of wedlock and the fact that not only married individuals have to take care of other dependants, these groups should be supported in tax-benefit systems.

As shown empirically, for more than half of the EU countries there are no (substantial) financial gains from being in wedlock. In some other Member States there is an important unequal treatment between cohabiting and married couples within their tax-benefit systems. Depending on the country, the strength of the unequal treatment varies substantially. In some countries cohabiting couples are, on average, better-off (Cyprus, Malta and Italy), while in other countries

¹⁶Birth grant, guaranteed minimum income and low pension benefit in Cyprus and rent subsidisation and social assistance in Malta are more generous for single parents, where a single parent in both countries is defined as not being married without taking into account the presence of a cohabiting partner.

Figure 7: Percentage change in disposable income in case of equal treatment (subsample couples).



Note: EUROMOD estimations based on EU-SILC 2017 data

(Luxembourg, Germany, Ireland, Poland and Belgium) married couples have financial advantages compared to cohabiting couples.

Unequal treatment of couples has political and also social implications. There are several aspects to discuss when treating cohabiting couples differently from married couples within the tax-benefit system. From an equity point of view, the different treatment that exists in several EU countries violates both horizontal as well as vertical equity. First, it can easily happen in the case of joint taxation when a low-income earner pays more taxes than a higher-income earner due to their marriage status.¹⁷ This clearly violates the principle of vertical equity.

Second, treating couples differently solely based on their marital status violates the principle of “marriage neutrality”, which is widely discussed in the US context analysing the tax code (see, e.g., [Puckett \(2009\)](#), [Listokin \(2013\)](#) or [Hemel \(2019\)](#)). A couple’s tax dues or benefit entitlements should not be different depending on their civil status. Similarly, if couples are otherwise in the same financial and economic situation but are different in marriage status and have to pay different taxes, it violates the principle of horizontal equity.¹⁸

The different treatment of couples also raises questions about fairness in tax systems related to gender equality. At the beginning of 2019, the European Parliament¹⁹ voted for a handful of actions aimed to support gender equality in taxation policies. The report, requested by the European Parliament’s Committee on Women’s Rights and Gender Equality²⁰, draws attention to the explicit and implicit gender bias inherited in taxation policies. Joint taxation lessens the redistributive power of income taxation, effectively taxing second earner’s income (mostly women) at a higher rate than that of the main earner, disincentivizing married women from accessing the labour market and therefore contributing to reallocation of paid and unpaid work within a family.²¹ Although joint income tax filling may result in a financial gain for the households, the second earner will not necessary benefit from it.²²

Therefore the European Parliament²³ calls to move to individual taxation and to eliminate all tax expenditures based on joint income especially in the form of tax allowances or credits for a spouse with little income while maintaining financial and other benefits linked to parenthood. Personal income structures should be designed to actively promote equal sharing of paid and unpaid work, income and pensions rights.

In the same vein, the Gender Equality Strategy 2020-2025²⁴, which frames the European Com-

¹⁷This is true if the unit of assessment is an individual.

¹⁸Moreover, married couples with children, who, on average, are better off than single parent families, might be offered tax advantages that are systematically not available to single parents (see, e.g., [Schechl et al. \(2020\)](#)).

¹⁹see [European Parliament resolution of 15 January 2019 on gender equality and taxation policies in the EU](#)

²⁰see [Gunnarsson et al. \(2017\)](#).

²¹If remain unemployed for longer, lower contributory periods to social security schemes may leave women with reduced entitlements to pension rights and increased risk of poverty in older age. In addition, in case of a divorce, women may find themselves in a precarious situation since their position in the labour market can be strongly limited by the decisions that were taken while married.

²²Usually it is assumed that financial gains are shared equally within a family, but the paper by [Ponthieux \(2013\)](#) shows that incomes are not always shared equally in EU countries. Thus, as women usually earn less than men, they would gain more from being taxed at an individual, rather than at a joint, tax rate [Himmelweit \(2002\)](#).

²³see [European Parliament resolution of 15 January 2019 on gender equality and taxation policies in the EU](#)

²⁴In this strategy, the European Commission pledges to develop guidance for the Member States on how national

mission's work on gender equality for five years period, also stresses that taxation and social protection systems should not perpetuate structural gender inequalities based on traditional gender norms so that both women and men can thrive in a gender-equal economy.

As shown before, unequal treatment of marriage and cohabitation with all the discussed consequences still exists in many European countries. Even though attempts have been made to eliminate these discrepancies, our analysis also highlights the issues related to the potential change of the current rules.

Applying marriage-related tax and benefit rules to all cohabiting couples would lead to foregone revenues for the governments currently having different fiscal treatment of spouses. In addition, it might lead to further decreased revenues due to reduced incentives for the second earner in a couple to participate in the labour market. For the second earner, there is the additional cost of lower entitlements to social security benefits and, more importantly, lower pensions in old age. Although applying marriage-related rules to all couples would ensure horizontal equity irrespective of marital status, preferential fiscal treatment of couples vis-à-vis other household types (especially of single-parent families or households with other dependant adults) would put into question the fairness of the tax-benefit systems.

For the above mentioned reasons (and other reasons as well) that relate to gender equality, as pointed out by the European Parliament, moving to individual taxation rules seem to raise revenues for governments with marriage bonuses but leads to losses for governments with marriage penalties. At the same time, individual tax-benefit systems would be simpler, fairer and would interfere less with household decisions on paid and unpaid work distribution within a couple. Although this would mean that some households would be financially worse-off, extra revenues collected might be better directed to specific population groups, such as households with children, poor households, unemployed, etc.

7. Conclusion

We analyse the unequal treatment of marriage and cohabitation within the tax-benefit systems of the EU Member States using EUROMOD, the tax-benefit model of the European Union. In the majority of EU Member States, being married does not bring substantial financial gains or losses for a couple. For several countries we find important differences, mainly stemming from personal income taxation rules that either assess incomes jointly or apply marriage-related allowances or credits, and also from different benefit eligibility rules. While in seven countries married couples are substantially better off than cohabiting partners (marriage bonus), in four countries, the opposite holds true (marriage penalty).

We not only find substantial differences in the size of the marriage bonus across some countries but also across different household types. In countries with marriage bonuses, single-earner households or two-earner households with substantially different income levels between partners typically receive a higher marriage bonus. For countries with the marriage penalty, it is the elderly households that are most affected.

tax and benefit systems can incentivise or disincentivise second earners. See [A Union of Equality: Gender Equality Strategy 2020-2025](#)

From a policy-maker's point of view, we highlight the budgetary costs that come along with changing the existing rules in some EU countries. Applying the same policy rules to cohabiting couples that exist for married people would make cohabiting couples financially better-off but would result in a substantial reduction in revenues for governments. Moreover, although couples were treated equality irrespective of their marital status, preferential fiscal treatment of couples vis-à-vis other household types would put into question the fairness of tax-benefit systems. On the other hand, abolishing the marriage-related tax-benefit components would lead to income losses for married couples but would result in increased government revenues that could be spent to targeted support of specific groups.

Finally, from a gender equality point of view, having marriage-related tax-benefit components might disincentivise the second earners - whom are mostly women - from participating in the labour market and therefore might contribute to further perpetuating traditional gender norms. Also, the unequal treatment of married and non-married couples violates vertical and horizontal equity principles. First, a second earner in the married couple might be effectively paying higher tax rates than the main earner, and, second, couples with the same income might be paying different tax dues only because of their marital status. Therefore, from both an equity and a gender equality point of view, the abolishment of marriage-related tax-benefit components would be desirable.

The results, however, should be interpreted with caution as they provide a static assessment of the different treatment of cohabiting and married couples within countries' tax-benefit systems without any behavioural reactions. That is, we cannot draw any conclusion on whether a particular tax-benefit system encourages people to marry or if there were behavioural changes because of the changes in the taxation or in social benefits' eligibility rules. Please also note, that the simulated impact is limited to the policies or their components that can be included and are modelled in EUROMOD microsimulation model (e.g. marriage bonuses stemming from survivor pensions or specific old-age pension rules that take into account civil status of a married couple, cannot be simulated). Future research could focus on answering the question as to what extent tax-benefit systems encourage marriage formation or dissolution in European countries.

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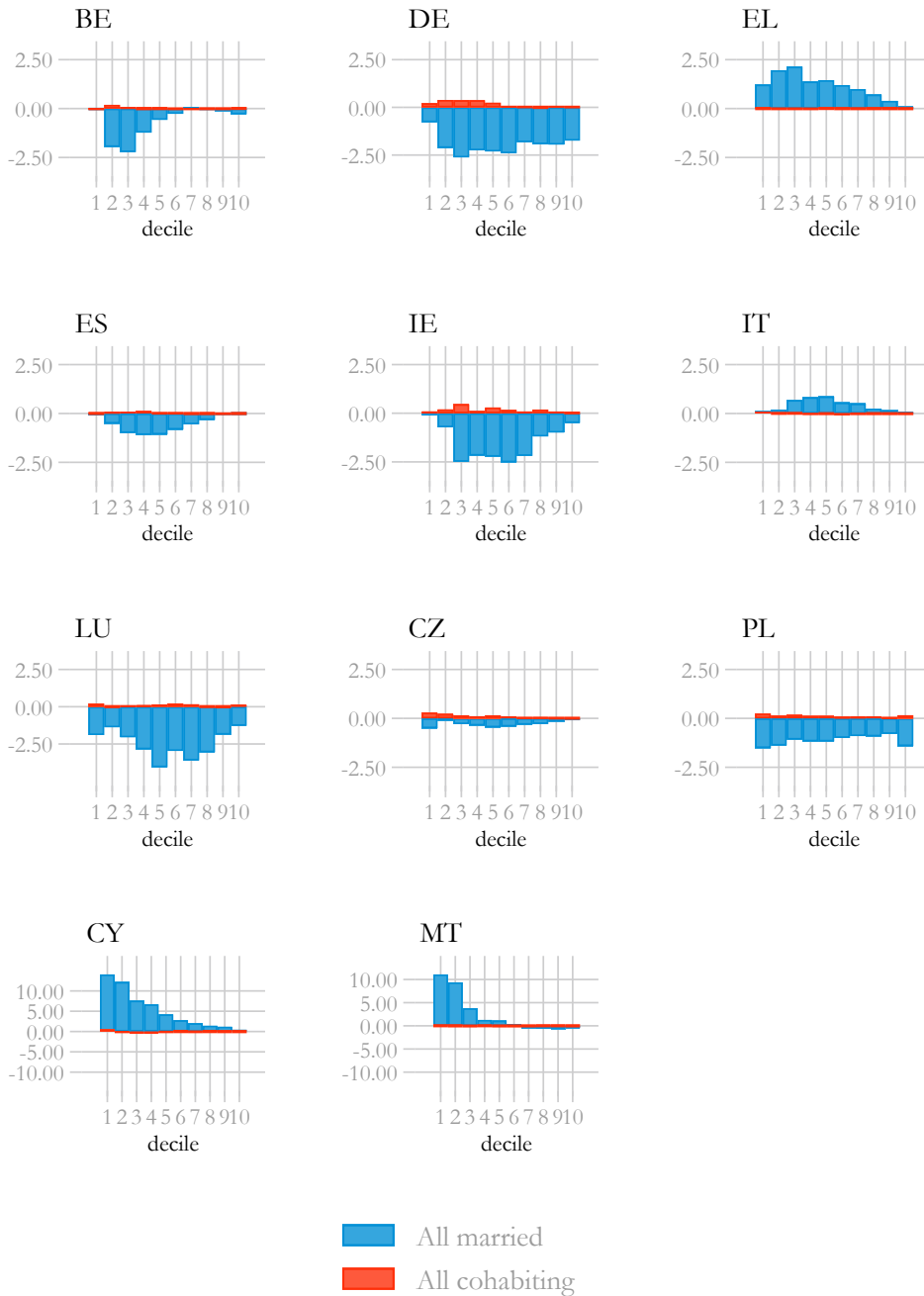
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8. Appendix

Figure 8: Percentage change in disposable income in case of equal treatment (all population).



Note: EUROMOD estimations based on EU-SILC data

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