

THE RELATIONSHIP BETWEEN TAXES, BENEFITS AND LIFE SATISFACTION: EVIDENCE FROM EUROPEAN COUNTRIES

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Acknowledgements

This working paper was authored by Fabrice Murtin, Head of Research, Modelling and Advanced Analytics Unit, and by Taketo Muroya, Policy Analyst, at the OECD Centre on Well-being, Inclusion, Sustainability and Equal Opportunity (OECD WISE Centre). The paper was produced under the oversight of Romina Boarini, Director of the OECD WISE Centre, and has benefited from comments and suggestions provided by members of the European Commission and the OECD Employment, Labour and Social Affairs Committee (ELSAC). Anne-Lise Faron prepared the paper for publication, while Martine Zaïda and Taylor Kelly provided valuable support and advice on communication. The OECD WISE Centre gratefully acknowledges the financial support provided by the European Commission for the preparation of this work. The paper was funded by the European Union via the Technical Support Instrument, and implemented by the OECD, in co-operation with the European Commission.

Abstract

This paper examines the relationship between subjective well-being and characteristics of the tax and benefit systems using micro and macro-level data from European countries. At the micro level, net transfers are associated with significant gains in life satisfaction among the bottom half of the income distribution, while net taxes are associated with only small decreases in life satisfaction for the top quintile. At the aggregate level, the tax burden has a large and negative association with life satisfaction, which is significantly weaker or even offset among countries with high government effectiveness. These results suggest that inclusive tax-benefit systems can enhance overall life satisfaction if accompanied by good governance quality.

Résumé

Ce document examine la relation entre le bien-être subjectif et les caractéristiques des systèmes fiscaux et des prestations sociales à l'aide de données micro et macro issues de pays européens. Au niveau microéconomique, les transferts nets sont associés à des gains significatifs de satisfaction de vie parmi la moitié inférieure de la distribution des revenus, tandis que les impôts nets ne sont associés qu'à de légères diminutions de la satisfaction de vie pour le quintile supérieur. Au niveau agrégé, la charge fiscale présente une association importante et négative avec la satisfaction de vie, laquelle est nettement plus faible, voire compensée, dans les pays caractérisés par une forte efficacité gouvernementale. Ces résultats suggèrent que des systèmes fiscaux et sociaux inclusifs peuvent améliorer la satisfaction de vie globale s'ils s'accompagnent d'une bonne qualité de gouvernance.

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1 Introduction

Over the past decade, research on the determinants of subjective well-being has expanded dramatically, with economists increasingly integrating measures of life satisfaction and happiness into economic analysis (Clark, 2018^[1]). This burgeoning literature has established that subjective well-being is influenced by a wide array of factors beyond income alone, including employment status, health, social relationships, and institutional context, and it has gained prominence in both academic and policy circles (OECD, 2017^[2]). The importance of this research strand is underscored by high-profile initiatives to measure well-being “beyond GDP”, reflecting a growing consensus that traditional economic indicators need to be complemented with metrics of life quality (Stiglitz, Fitoussi and Durand, 2018^[3]). Policymakers, too, recognise that “subjective well-being measures are critical to assess the non-monetary costs and benefits of public programs and policies” (Stiglitz, Fitoussi and Durand, 2018, p. 14^[3]), leading organisations such as the OECD to systematically track life satisfaction across countries (OECD, 2017^[2]).

An important yet relatively underexplored question in the literature on inequality and well-being concerns the extent to which redistributive policies affect life satisfaction. Previous studies indicate that higher levels of income inequality are negatively associated with subjective well-being, particularly in OECD countries (Hajdu and Hajdú, 2014^[4]; Graafland and Lous, 2018^[5]), with disproportionate adverse effects borne by lower-income groups, implying that even modest transfers can yield significant welfare gains for vulnerable populations (Lous and Graafland, 2022^[6]). Similarly, some studies emphasise the mediating role of tax-transfer systems, showing that greater income redistribution is positively correlated with life satisfaction both within and across countries (Cheung, 2018^[7]). These findings suggest that redistributive policies not only improve outcomes for lower-income groups but may also enhance social cohesion, generating well-being benefits for middle- and higher-income groups as well (OECD, 2015^[8]).

Regarding the respective roles of taxes and transfers, Akay et al. (2012^[9]) find that paying taxes is positively associated with happiness conditional on net income, with effects particularly pronounced among low-income and left-leaning individuals, while Oishi et al. (2012^[10]) show that progressive taxation increases well-being when accompanied by the provision of high-quality public goods, thereby underscoring the importance of reciprocity and perceived fairness. Taken together, these studies indicate that redistributive policies can enhance life satisfaction through inequality reduction, but their effects could depend critically on the type of taxes levied, the structure of transfer schemes, and the broader socio-political context in which fiscal burdens and benefits are distributed and perceived.

This study aims to provide new empirical evidence on how tax-transfer systems shape individual life satisfaction, using rich microdata and macroeconomic indicators. This work extends an earlier study by Boarini et al. (2022^[11]), who examined the relationships between subjective well-being and income, unemployment and life expectancy, then developed a welfare metric that combined those dimensions with heterogeneous preferences. The present analysis builds on that approach by adding the tax-transfer systems into the welfare metric. By leveraging microdata on European households and macroeconomic indicators, this study examines the direct well-being associations of taxes and transfers beyond their relationships with material income. This allows us to quantify, for instance, how much life satisfaction is positively associated with a given increase in social transfers or how much is negatively associated with a

tax hike, all else equal. It is also explored whether these associations differ across sub-groups (for example, by income level or country), thereby identifying any heterogeneity in the welfare returns to redistribution.

The results indicate that both higher household market income and higher net transfers received are associated with greater life satisfaction, while higher unemployment at both the individual and aggregate level is associated with significantly lower life satisfaction. The paper also finds that: i) the positive association between national income and life satisfaction is stronger for older individuals and those in good health, whereas younger and middle-aged adults derive relatively less subjective benefit from macroeconomic income gains; ii) the negative well-being association of unemployment is universally felt, and it is particularly acute for those who directly experience joblessness; iii) positive net transfers to the bottom half of the income distribution yield more life satisfaction gains in absolute value than the life satisfaction losses implied by net taxes paid by the top half of the income distribution. The last finding suggests that for a given level of taxes and transfers, more progressive redistributive schemes can enhance average subjective well-being.

On the other hand, only a weak relationship between subjective well-being and country's income inequality or income redistribution is found. Furthermore, the association between life satisfaction and the macro-level tax burden is more than two times larger than that with the average volume of transfers, implying that higher taxation can outweigh the positive welfare gains from redistribution. This highlights the need for targeted support to vulnerable groups and efficient use of tax revenues to improve overall well-being. The analysis also finds that countries with higher tax burdens do not have systematically lower life satisfaction once how the tax revenues are used is taken into account. In fact, when high taxes coincide with high-quality governance and public services, life satisfaction is comparatively high, which is a pattern exemplified by the Nordic countries.

This paper is structured as follows. Section 2 describes the conceptual and the empirical framework, including the econometric specification, and the datasets used. Section 3 presents the main results in three parts: Baseline regression results quantifying the roles of income and unemployment in life satisfaction; analysis of inequality, poverty and well-being, examining how life satisfaction relates to income disparities; and an assessment of the tax-benefit system and well-being, which evaluates how individual and country's taxes and transfers (or net of each other) are associated with life satisfaction across income groups and countries. Section 4 presents a cross-country policy simulation of increased benefits as a case study. Section 5 discusses the implications and limitations of the paper, as well as directions for future research. Finally, section 6 concludes with a summary of findings considering how tax and transfer policies might be designed to improve overall well-being.

2 Data and methods

2.1. Theoretical setup

Methodologically, the paper adopts a welfare-accounting approach that recovers an empirical “welfare function” from microdata rather than imposing normative weights. We start from the idea that an individual’s reported life satisfaction is a noisy linear transformation of instantaneous utility. We then estimate life-satisfaction regressions on household market income and the tax-benefit components of disposable income, together with non-pecuniary circumstances (employment status and other personal characteristics) as well as country-level environments (unemployment, average income, fiscal size, inequality and governance quality). The resulting coefficients are interpreted as marginal utilities and, by normalizing on the income coefficient, could be converted into income-equivalent weights for each non-economic component. In this sense, life satisfaction enters only indirectly. It provides the empirical “pricing” of non-market conditions that allows us to aggregate income and external factors into a comparable welfare metric and to evaluate how alternative redistributive schemes shift welfare across groups and countries. This strategy follows and extends Boarini et al. (2022^[11]).

Building on well-established economic theory, society’s welfare W can be formally defined with the help of a social welfare function, which is written in Atkinson (1970^[12]) formulation as a generalised mean over individual welfare¹ with a coefficient of inequality aversion τ :

$$W = \left(\frac{1}{n} \sum_i (V_i)^{1-\tau} \right)^{\frac{1}{1-\tau}}$$

where V_i stands for indirect utility deriving from lifetime income and other “environmental factors” or quality of life dimensions. As this paper ignores life cycle and longevity issues, it can simplify the valuation framework developed in Rosen (1988^[13]), Becker et al. (2005^[14]), Jones (2016^[15]), and Boarini et al. (2022^[11]). Consider a hypothetical life-cycle individual who receives the same annual income per capita $y_i(t) = y_i$ and faces the same set of environmental factors $X_i(t) = X_i$ throughout her lifetime. Under the assumption that the interest rate r equals the rate of time preference ρ , the solution of the agent’s lifetime utility maximisation programme specifies that consumption remains constant throughout the life cycle, and that for all t , $c_i(t) = y_i$, so that indirect utility is simply given by $V(y_i, \pi, X_i) = u(y_i, X_i)$.² where $u(\cdot)$ stands for instantaneous utility and A is a discounting factor, namely the value of an annuity discounted by the survival function, which is here identical for everyone. Without any loss in generality, social welfare then becomes a geometric average of instantaneous utility:

$$W = \left(\frac{1}{n} \sum_i (u(y_i, X_i))^{1-\tau} \right)^{\frac{1}{1-\tau}} \quad (1)$$

The next task is to select a specific form for the instantaneous utility function by including several “environmental” variables that generate additional utility or disutility for people (i.e. positive or negative externalities) and also bring about preferences’ heterogeneity across groups of people as in Boarini et al. (2022^[11]).

Employment and unemployment are the first set of “environmental” variables that affect people. Access to jobs and conversely, the loss of social connections and purpose in life for the unemployed, have been found to be determinants of well-being in empirical studies (Blanchflower, 2004^[16]). Evidently, a status as employed or unemployed also has a direct effect on an individual’s income that is captured via the income variable. In addition to direct status and income effects for the individuals, there are externalities in terms of security and social cohesion for everyone. This paper proxies these effects with the aggregate employment and unemployment rates measured at country level.²

Average disposable income in the country is the second “environmental” factor that this paper considers. Several studies have considered national income as a determinant of life satisfaction in addition to individual income. This reflects individuals’ utility gain from living in a relatively affluent country (Clark, 2008^[17]). The relationship between life satisfaction and income is significant both across countries and within countries in recent data (Stevenson, 2008^[18]). All this suggests controlling for both individual income (as a classical determinant of individual utility) and average income (as an environmental factor).

The third set of considered “environmental” factors (of economic and social nature) are the characteristics of the tax and benefit systems and their associated outcomes, namely the level of inequality and poverty in the country, as well as the degree of redistribution as measured by the difference in the Gini coefficients of market and disposable incomes. The country-level tax burden is the tax revenue share of GDP calculated by the OECD. The proxy for the amount of transfers received is the average amount of transfers as a share of equivalised disposable income measured in the microdata.

In terms of the functional form and following empirical evidence provided by Layard R. (2008^[19]), this paper selects a logarithmic utility function, defined over the current consumption bundle with an inter-temporal elasticity of substitution equal to unity, and environmental factors X, Γ that are both individual and country-specific:

$$u(y_i, X_i) = \alpha \cdot \log(y_i) + X_i \cdot \Gamma_i \quad (2)$$

where X is a matrix of observables characteristics and Γ a vector of coefficients. Importantly, this paper further accounts for heterogeneity in people’s preferences by following Decancq (2015^[20]) and introduce interactions between personal characteristics and the average income variable. As discussed above, the set of environmental factors include: i) country’s (un)employment rate $U_{c,t}$; ii) average tax and transfers rates $(TX_{c,t}, TR_{c,t})$, interacted with the average country-level governance quality G_c , as well as the time-varying governance quality variable $G_{c,t}$, inequality and redistribution outcomes $IN_{c,t}$. For an individual i in country c at time t , one has:

$$X_{i,c,t} \cdot \Gamma_i = \theta \cdot U_{c,t} + (\gamma + W_i \cdot \Lambda) \cdot \log(y_{c,t}) + (\lambda + G_c \cdot \Lambda) \cdot TX_{c,t} + (\mu + G_c \cdot \Lambda) \cdot TR_{c,t} + \nu \cdot G_{c,t} + \pi \cdot IN_{c,t} \quad (3)$$

The effect of taxes and transfers observed at individual level is also analysed in the following way. Let $(y_{i,c,t}^{disp}, y_{i,c,t}^{market}, taxes_{i,c,t}, transfers_{i,c,t})$ denote disposable income, market income, taxes paid and transfers received, respectively, and $tx_{ict}^{net} = (Taxes_{ict} - Transfers_{ict}) / Y_{ict}^{disp}$ be the household’s net taxes share of disposable income, which reflects the degree of fiscal redistribution affecting the household – positive for net contributors (taxes exceeding transfers) and negative for net beneficiaries (transfers exceeding taxes). One has:

$$\begin{aligned} tx_{ict}^{net} &= (taxes_{ict} - transfers_{ict}) / y_{i,c,t}^{disp} \\ y_{i,c,t}^{disp} &= y_{i,c,t}^{market} - taxes_{i,c,t} + transfers_{i,c,t} = y_{i,c,t}^{market} - tx_{ict}^{net} \cdot y_{i,c,t}^{disp}, \text{ or} \\ y_{i,c,t}^{disp} &= y_{i,c,t}^{market} / (1 + tx_{ict}^{net}) \end{aligned} \quad (4)$$

The latter equation allows disentangling the effect of market income and net taxes.

A final remark is that in this setting, inequality can have three different impacts on social welfare. First, people may dislike inequality, an effect that is captured by including an inequality measure in the set of country-level environmental factors (X). Even holding their own income constant, individuals may feel worse living in a more unequal society because of social comparisons, perceived unfairness, lower trust or weaker social cohesion. If inequality enters (X) with a negative coefficient, it means that inequality reduces life satisfaction *directly*, as experienced by individuals.

Second, the social planner may dislike inequality, which boils down to a normative channel. Independently of what people report, a social welfare function may assign extra weight to equality for ethical or policy reasons. The welfare function may allow the social planner to have inequality aversion ($\tau > 0$). This is not an empirical claim about preferences, but rather a normative choice about how society should trade off total income against its distribution.

Third, there is diminishing marginal utility of income. Even if individuals do not care about inequality per se and the social planner is not inequality-averse, inequality can still reduce social welfare when utility is concave, as with the logarithmic utility function. With diminishing marginal utility, transferring one Euro from a poorer person to a richer person lowers total utility, or equivalently, a mean-preserving spread on income reduces average utility and hence social welfare. Actually, with $\tau = X = 0$, the change in social welfare over time is simply:

$$\Delta W = \Delta \log \bar{y} - \Delta \text{MLD} \quad (5)$$

where $\bar{y}$ is average income and MLD stands for the inequality index called Mean Logarithmic Index.

2.2. Econometric framework

The key identifying assumption is that life satisfaction can be viewed as a noisy proxy (or a linear transformation) of instantaneous utility, implying from (2) that:

$$LS_{i,c,t} = \alpha \cdot \log(y_{i,c,t}) + X_{i,c,t} \cdot \Gamma_i + \theta_{i,c,t} \quad (6)$$

where $LS_{i,c,t}$ is the life satisfaction score (on a scale from 0 to 10) reported by individual i , α is a coefficient reflecting individual preferences vis-à-vis income, and $\theta_{i,c,t}$ represents an error term with a structure discussed below. This identifying assumption is supported by the empirical finding that most respondents to life satisfaction surveys are not forward looking and have a relatively short time horizon in mind. Hence, life satisfaction is deemed to reflect contemporary and large changes in socio-economic conditions rather than long-term transformations with small contemporary changes.

The vector θ_i comprises country fixed-effects a_j that reflect systemic cross-country cultural (or other time-invariant) differences in the relationship between life satisfaction and individual utility, a period-specific component b_t allowing momentary shifts in the latter relationship, individual characteristics Z such as gender, age, educational attainment, marital status, employment status, health status, social isolation status and an indicator of relative poverty (e.g. whether the person's income is below 60% of the median in their country-year), which reflect systemic differences in life satisfaction across population groups enjoying the same level of instantaneous utility, as well as an idiosyncratic error term:

$$\theta_{i,c,t} = a_c + b_t + Z_{i,c,t} \cdot \pi + \varepsilon_{i,c,t} \quad (7)$$

Combining equations (3), (6), (7) yields the following specification of life satisfaction model:

$$LS_{i,c,t} = \alpha \cdot \log y_{i,c,t}^{disp} + \theta \cdot U_{c,t} + (\gamma + W_i \cdot \Lambda) \cdot \log(y_{c,t}) + (\lambda + G_c \cdot \Lambda) \cdot TX_{c,t} + (\mu + G_c \cdot \Lambda) \cdot TR_{c,t} + \nu \cdot IN_{c,t} + a_c + b_t + Z_{i,c,t} \cdot \pi + \varepsilon_{i,c,t} \quad (8)$$

where i indexes individuals, c countries, and t years. In all regressions, country fixed effects a_c and time effects b_t are always included. With these two-way fixed effects setup, identification comes from within-

country, over-time variation and individual deviations from country-year averages. This paper clusters standard errors at the country level to allow for correlation in shocks within countries.

This model is further extended with the help of equation (4), which helps decompose disposable income into its market and tax-transfer components:³

$$LS_{i,c,t} = \alpha \log y_{i,c,t}^{market} - \alpha \log(1 + tx_{ict}^{net}) + \theta \cdot U_{c,t} + (\gamma + W_i \cdot \Lambda) \cdot \log(y_{c,t}) + (\lambda + G_c \cdot \Lambda) \cdot TX_{c,t} + (\mu + G_c \cdot \Lambda) \cdot TR_{c,t} + \nu \cdot IN_{c,t} + a_c + b_t + Z_{i,c,t} \cdot \pi + \varepsilon_{i,c,t} \quad (9)$$

Note that in the above equation, the coefficients on log market income and on the net tax share of income variable should be the opposite.

Overall, this econometric framework allows us to estimate how various factors, such as incomes, unemployment, inequality, taxes and transfers, contribute to life satisfaction. Coefficients can be interpreted in meaningful units. For example, α on $\ln y_{it}^{disp}$ can be interpreted as the percentage change in life satisfaction (on the 0-10 scale) associated with a 1% increase in disposable income. In addition, some effects can be converted into *income-equivalent effects*: using the estimated coefficients, one can ask how much additional income would be needed to compensate for a given adverse change (such as a rise in the unemployment rate). This approach yields measures like the shadow price of unemployment, which is an analogue to what Boarini et al. (2022^[11]) computed, expressed as a percentage of income.

2.3. The data

The empirical analysis draws from two main data sources. The first is micro-level data on households and individuals, and the second is country-level data on macroeconomic variables. Specifically:

Household Microdata (EU-SILC)

Individual-level information on life satisfaction, incomes and other individual characteristics comes from the Eurostat's European Union Statistics on Income and Living Conditions (EU-SILC). The EU-SILC is a large survey that collects harmonised data on income, poverty, social exclusion, and living conditions across European countries. It provides detailed information on household incomes (including components such as, market income, taxes and social transfers) as well as personal characteristics of household members. Importantly for our purposes, recent waves of EU-SILC include questions on subjective well-being, which is notably an item asking respondents to rate their overall life satisfaction on a scale (0 = not at all satisfied, 10 = fully satisfied). This study utilises multiple waves, focussing on the countries of European countries. Our sample covers approximately 1.6 million observations from about 25 countries over the period 2013, 2018, 2021, 2022 and 2023. The years 2014-2017 and 2019-2020 are not included in the analysis because the life satisfaction variable is not available for those years. Incomes in the survey are measured at the household level and equivalised (adjusted for household size), so that they reflect a per-person income standard. This study converts all monetary amounts to real terms and, where necessary, to a common currency (euro). Because the income reference year in EU-SILC generally corresponds to the previous calendar year, income-related variables such as disposable income, market income, taxes, and transfers are lagged by one year.

Country-Level Data (OECD, Gallup, EU, World Bank and aggregated data from EU-SILC)

Aggregate economic indicators are obtained from the OECD's statistical databases and related sources. The country's average household disposable income (measured by dividing country's real net disposable income of households and NPISH by country's population) and unemployment rate (measured as the percentage of the labour force unemployed) are taken from the OECD Data Explorer. The measures of income inequality are generated using the data from EU-SILC. The Gini indices are calculated based on

both market income (income before taxes and transfers) and disposable income (after taxes and transfers). In addition, income quintile share ratios (like the ratio of income of the top 20% to the bottom 20%) are used as an alternative measure of inequality calculating them from EU-SILC data as well. Governance quality variables, such as perceptions of government corruption, VAT compliance gap and government effectiveness are taken from the Gallup World Poll, EU VAT Gap Report and Worldwide Governance Indicators from World Bank. For macro-level fiscal indicators such as taxes and transfers, the following measures are adopted. The country-level tax revenue (primary balance and debt) share is taken from the OECD Data Explorer and refers to general government tax revenue (primary balance and debt) expressed as a percentage of GDP. The macro indicator of transfers is derived from EU-SILC data and measured as the average share of transfers in equivalised disposable household income (one-year lagged due to the income reference year of the EU-SILC).

Descriptive statistics for key variables are shown in Table 1., which reports averages for household incomes, redistribution, inequality, and life satisfaction. Cross-country differences are large: Disposable income ranges from under EUR 9 000 in Hungary to over EUR 50 000 in Luxembourg and Switzerland. Market income is typically higher than disposable income in high-income countries (net taxpayers) but can be lower where transfers exceed taxes. The net transfers share of disposable income highlights redistributive balance: negative values mean households are net contributors, positive values net beneficiaries. For example, the Netherlands shows -3.3% (slightly net payers), while France shows +14.3% (reflecting extensive social benefits). France's households receive transfers equal to 39.1% of disposable income against taxes of 24.9%. Denmark, by contrast, has -12.8%, as taxes (56.0%) far exceed transfers (43.2%), consistent with its high-tax, high-service model. Tax revenue share also displays marked heterogeneity, from 21.5% in Ireland to 45.1% in France. Inequality is markedly reduced by redistribution, with Gini indices falling from around 0.34-0.48 on market income to as low as 0.19-0.32 on disposable income. Life satisfaction varies between 6.6 in Greece and Hungary, and 8.0 in Switzerland, with Nordic countries reporting also high scores. Overall, higher incomes and robust welfare states are associated with higher life satisfaction.

Table 1. Descriptive statistics

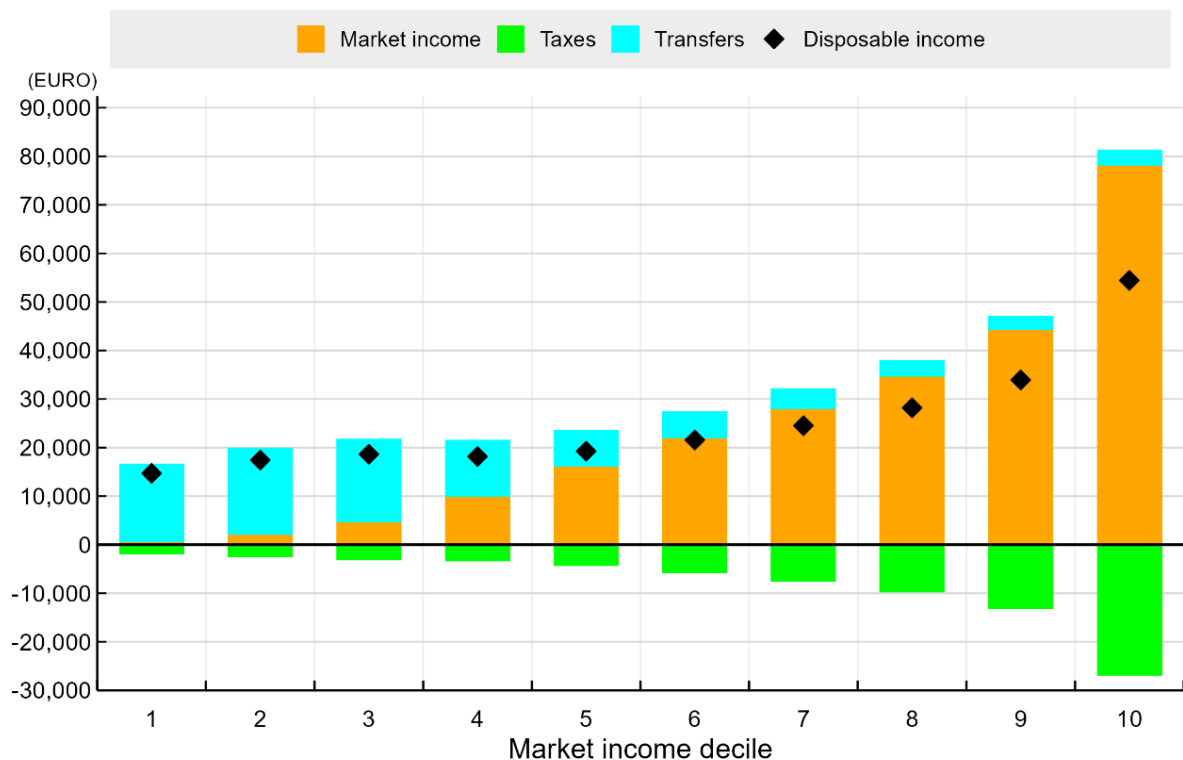
Country	Household disposable income (EUR)	Household market income (EUR)	Net transfers share of disposable income (%)	Transfers share of disposable income (%)	Taxes share of disposable income (%)	Tax revenue share of GDP (%)	Gini index based on market income	Gini index based on disposable income	Income ratio based on disposable income	Life satisfaction (0-10 scale)
Austria	34 957	34 084	2.5	35.2	32.7	42.7	0.45	0.25	4.1	7.8
Belgium	32 559	32 335	0.7	34.5	33.8	43.0	0.43	0.23	3.6	7.6
Czechia	13 317	12 374	7.1	25.9	18.8	33.7	0.45	0.24	3.6	7.3
Denmark	36 300	40 942	-12.8	43.2	56.0	44.6	0.42	0.22	4.3	7.5
Estonia	13 919	13 058	6.2	25.2	19.0	32.7	0.45	0.29	5.4	7.0
Finland	29 962	27 151	9.4	40.0	30.6	42.9	0.40	0.23	4.1	7.8
France	30 307	25 985	14.3	39.1	24.9	45.1	0.44	0.25	4.1	7.1
Germany	29 331	31 720	-8.1	33.7	41.8	38.8	0.44	0.26	4.5	7.1
Greece	12 404	12 463	-0.5	40.6	41.0	39.5	0.44	0.28	4.7	6.6
Hungary	8 794	8 424	4.2	29.4	25.2	36.0	0.39	0.24	3.8	6.6
Ireland	38 924	39 210	-0.7	27.2	28.0	21.5	0.41	0.23	4.1	7.5
Italy	25 610	22 487	12.2	42.5	30.3	42.7	0.46	0.29	5.1	7.1
Latvia	11 387	10 894	4.3	25.5	21.2	30.8	0.45	0.32	6.4	6.7
Lithuania	11 584	12 072	-4.2	23.8	28.0	30.6	0.46	0.31	6.1	6.9
Luxembourg	56 403	56 804	-0.7	32.2	32.9	38.8	0.37	0.24	4.4	7.3
Netherlands	28 919	29 877	-3.3	41.7	45.0	37.8	0.41	0.22	3.9	7.6
Norway	49 589	48 448	2.3	34.9	32.6	41.1	0.34	0.19	4.1	7.7
Poland	10 152	9 427	7.1	32.9	25.8	34.6	0.40	0.26	4.0	7.6
Portugal	13 892	12 763	8.1	39.1	31.0	35.0	0.48	0.31	5.6	6.7
Slovak Republic	11 024	9 998	9.3	26.9	17.6	34.1	0.37	0.21	3.2	7.1
Slovenia	17 315	15 884	8.3	34.6	26.3	37.4	0.40	0.22	3.6	7.3
Spain	22 154	19 700	11.1	31.7	20.6	36.2	0.44	0.29	4.9	7.1
Sweden	30 100	29 148	3.2	36.7	33.6	42.6	0.39	0.22	4.4	7.5
Switzerland	55 525	63 665	-14.7	29.1	43.7	27.1	0.35	0.23	4.5	8.0
United Kingdom	28 735	26 273	8.6	33.4	24.8	32.4	0.46	0.28	4.6	7.5

Note: Household incomes are equivalised and adjusted for inflation. Net transfers share = (transfers – taxes) / disposable income. “Income ratio” refers to the ratio of top 20% decile to bottom 20% decile average disposable income. Life satisfaction is the mean self-reported level on a 0-10 scale. Data are averaged over 2013, 2018, 2021, 2022 and 2023.

Source: EU-SILC microdata and OECD Data Explore.

Figure 1 illustrates how redistribution works across income distribution. It shows household disposable income by market income decile, split into market earnings, transfers and taxes. As expected, lower deciles rely heavily on transfers: the poorest decile often has near-zero market income but receives substantial transfers, yielding positive disposable income. In contrast, the top decile pays more in taxes than it receives, so its disposable income is slightly below its market income, reflecting net fiscal contribution. The figure highlights the redistributive effect: from bottom to top deciles, the share of income from transfers falls while the share from market sources rises. Middle deciles roughly break even, with taxes balancing benefits. Overall, European tax-transfer systems significantly raise disposable incomes of the bottom, who would otherwise have little income, financed by reductions in disposable income for the top.

Figure 1. Decomposition of household disposable income by market income decile

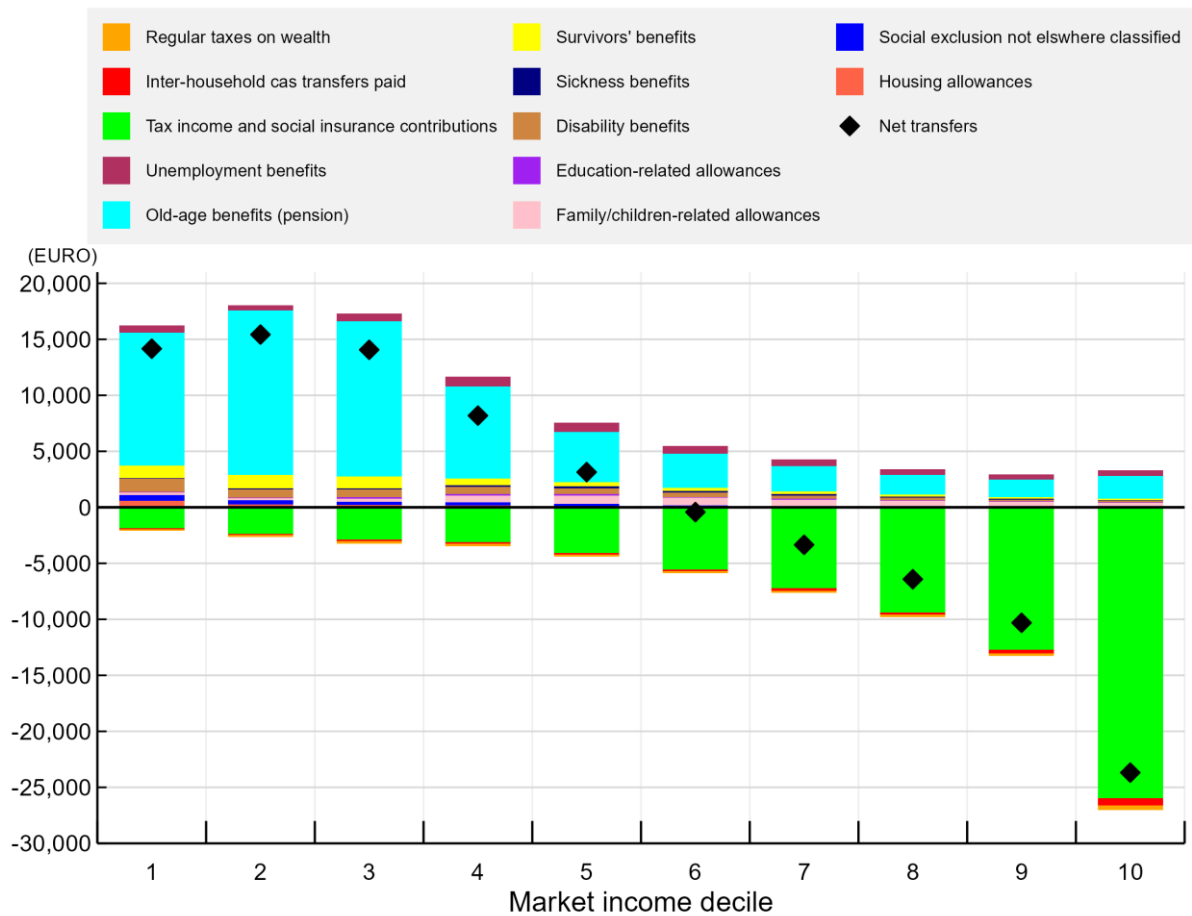


Note: Household incomes are equivalised and adjusted for inflation. Each bar shows the average disposable income for a given market income decile, divided into average market income, transfers and taxes. Decile 1 is the poorest tenth of individuals by market income, while decile 10 is the richest tenth. Data are averaged over 2013, 2018, 2021, 2022 and 2023.

Source: EU-SILC microdata.

Figure 2 complements this picture by decomposing net transfers by market income decile, showing both average transfers received (positive) and taxes paid (negative). The lowest deciles receive far more in transfers than they pay. Middle deciles both pay taxes and receive benefits, such as education, child allowances, or pensions, which roughly balance out. In contrast, the top decile pays much more in taxes than it receives, making a large net contribution. This pattern underscores the progressive nature of European welfare states: the rich largely finance the system, the poor benefit most, and middle groups hover around balance. Even high-income households receive some transfers (e.g. pensions or universal benefits), but far less than their tax payments.

Figure 2. Decomposition of net transfers by market income decile



Note: Transfers are shown as positive bars and taxes as negative bars. The net height of the bars (transfers minus taxes) corresponds to net transfers. The classification of the items is based on the variables of EU-SILC. Data are averaged over 2013, 2018, 2021, 2022 and 2023. Source: EU-SILC microdata.

3 Main results

3.1. Baseline regressions

To start with, baseline regressions of life satisfaction on income and unemployment are presented to establish the core relationships underpinning societal welfare. Table 2 presents the first set of estimates. Column (1) uses a purely macro-level approach: Individual life satisfaction is regressed on the country's log average household income and unemployment rate with controls of individual characteristics and country and year fixed effects. The coefficient on log average income is positive and statistically significant (around 1.3, with $p < 0.05$), indicating that as a country becomes richer, its residents' life satisfaction tends to rise. Meanwhile, a one-point increase in the unemployment rate is associated with a decrease in life satisfaction (coefficient around -0.03).

Column (2) switches to a micro-level regression: Individual life satisfaction is regressed on the individual's own log disposable income, labor status and personal characteristics, plus country and year fixed effects. Here it is shown that individual income has a strong positive association: The coefficient on log income is about 0.45 and highly significant. While seemingly small compared to the coefficient of macro income, this is a meaningful correlation given that life satisfaction has a finite range and many determinants; it aligns with the magnitude of correlation commonly found in the literature. In addition, the individual unemployment dummy has a large negative coefficient, meaning an unemployed person's life satisfaction is about 0.8 points lower than an otherwise similar employed person's. Losing one's job causes a drop in well-being beyond the loss of income, due to psychological distress, loss of purpose, and other factors. Our estimate is in line with the consensus that unemployment is one of the strongest depressors of life satisfaction.

In column (3), the micro and macro perspectives are combined by including both individual income and country average income together, along with all controls. Interestingly, both retain significant positive coefficients: the individual log income association remains around 0.45, and the country's log average income retains a coefficient around 1.0. This suggests two distinct mechanisms at play: (a) richer individuals are happier (private income effect), and (b) there is a positive externality to well-being from living in a richer economy (beyond one's own income). The latter could reflect better public goods, infrastructure, or a general climate of prosperity that benefits everyone. It could also capture latent factors correlated with development (like democratic quality or social trust) that tend to improve life satisfaction.

Table 2 also expresses these associations in terms of "social costs", i.e. costs that combine individual and external effects. For instance, in the combined regression (3), the well-being loss for an unemployed individual is equivalent to a 6.5% drop in income for each one-percentage points (p.p.) increase in the unemployment rate. At the population level, the estimated cost is smaller, around 2.3% of income per capita. These values capture both the direct hardship faced by the unemployed and the wider societal anxiety that accompanies economic downturns.

Table 2. The first estimates

	Macro regression (1)	Micro regression (2)	Combined regression (3)
Log of average household disposable income	1.325** (0.541)		1.027* (0.590)
Log of individual disposable income		0.448*** (0.036)	0.445*** (0.036)
Country's unemployment rate	-0.034** (0.014)		-0.033** (0.015)
Individual unemployment dummy		-0.842*** (0.060)	-0.831*** (0.056)
Social cost of unemployment for the unemployed (% of income lost by the unemployed per point of the unemployment rate)		10.4%	6.5%
Social cost of unemployment per capita (% of income lost per point of the unemployment rate)	2.3%	1.1%	2.3%
Controls for gender, age, education, health, isolation and marital status	Yes	Yes	Yes
Time dummies	Yes	Yes	Yes
Country dummies	Yes	Yes	Yes
N	1.6e+06	1.6e+06	1.6e+06
R2	0.118	0.146	0.148

Note: Dependent variable is life satisfaction. The health status is controlled for using EU-SILC question PH020 ("Suffer from any chronic illness or condition"). The isolation status is controlled for using EU-SILC question PD050 ("Getting together with friends or family for a drink or meal at least once a month"). Robust standard errors are clustered at the country level. ***p < 0.01; **p < 0.05; *p < 0.1. For the calculation of social cost of unemployment, sample's unemployment rate 0.052 and a country's unemployment rate 0.081 are used.

Source: OECD calculations.

The first regressions assumed uniform income associations, but different groups may experience them differently. To capture this heterogeneity, Table 3 introduces interactions of national average disposable income with gender, education, age, income position, employment, and health, while still controlling for personal and macro income, unemployment, and fixed effects.

While the coefficients of gender, education and employment interactions are insignificant, older individuals benefit much more from rising national income than younger or middle-aged adults. High- and middle-income households also gain slightly more than low-income households, consistent with their greater ability to benefit from prosperity. Healthy individuals show larger well-being gains from economic growth. Importantly, the main coefficients remain robust: national and personal income remains strongly positive, unemployment at the macro level negative, and being individually unemployed strongly harmful.

In sum, most groups benefit similarly from rising national income, but three stand out: (1) older individuals gain more than younger or middle-aged; (2) higher-income groups gain slightly more than lower-income ones; (2) healthy people gain more than those in bad health. Overall, income growth raises well-being broadly, while unemployment universally depresses it, but complementary policies may be needed to ensure gains reach younger, low income and less healthy groups.

Table 3. The baseline regressions with interaction effects

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Log of average household disposable income (y)	1.039*	1.047*	1.419**	1.131*	1.028*	1.019*	1.507**
	(0.597)	(0.586)	(0.610)	(0.574)	(0.595)	(0.573)	(0.588)
Log y × male	-0.028						0.003
	(0.059)						(0.056)
Log y × higher education		-0.140					-0.109
		(0.237)					(0.204)
Log y × young-age			-0.534***				-0.536***
			(0.149)				(0.157)
Log y × middle-age			-0.542***				-0.541***
			(0.149)				(0.157)
Log y × high income				0.033***			0.032***
				(0.003)			(0.003)
Log y × middle income				0.020***			0.021***
				(0.002)			(0.002)
Log y × unemployed					-0.011		0.204
					(0.402)		(0.404)
Log y × good health						0.071***	0.070***
						(0.004)	(0.004)
Log of individual disposable income	0.445***	0.445***	0.449***	0.261***	0.445***	0.426***	0.249***
	(0.036)	(0.036)	(0.037)	(0.027)	(0.036)	(0.032)	(0.024)
Country's unemployment rate	-0.033**	-0.032**	-0.033**	-0.032**	-0.033*	-0.032**	-0.032*
	(0.015)	(0.016)	(0.016)	(0.015)	(0.016)	(0.015)	(0.016)
Individual unemployment dummy	-0.831***	-0.831***	-0.841***	-0.820***	-0.831***	-0.808***	-0.811***
	(0.056)	(0.056)	(0.058)	(0.055)	(0.052)	(0.054)	(0.055)
Controls for gender, age, education, health, isolation and marital status	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	1.6e+06	1.6e+06	1.6e+06	1.6e+06	1.6e+06	1.6e+06	1.6e+06
R2	0.148	0.148	0.148	0.149	0.148	0.166	0.168

Note: Dependent variable is life satisfaction. Higher education refers to attainment of tertiary education. Young age and middle age indicate individuals younger than 35 years and those aged 35-59 years, respectively. High income and middle income denote households in the top and middle terciles of the income distribution, respectively. Good health refers to respondents who reported their health status as “very good”. Robust standard errors are clustered at the country level. ***p < 0.01; **p < 0.05; *p < 0.1.

Source: OECD calculations.

3.2. Inequality, poverty and well-being

This section examines whether inequality and redistribution correlate with life satisfaction beyond individual income. Table 4 introduces the Gini index of market income into the regressions, controlling for individual income and age-income interactions. In column (1), the market-income Gini is positive but insignificant, indicating that higher inequality is not systematically associated with lower average life satisfaction. However, interactions with age groups reveal heterogeneity (Column 2). For younger cohorts (16-49), the coefficients are positive and significant, consistent with a “tunnel effect” as in Becchetti et al. (2023^[21]) where inequality is perceived as signalling opportunity. For older cohorts, no significant association emerges, possibly suggesting that generational differences may shape perceptions of inequality.

Similarly, the market income ratio (Column 3), the Gini index of disposable income (post taxes and transfers, Column 4) or the disposable income ratio (Column 5) yields no significant relationship with life satisfaction. To assess the association of redistribution, a relative Reynolds-Smolensky index is used,

implying that redistribution is measured as the proportional Gini reduction from taxes and transfers. Its association with life satisfaction is positive but insignificant (Column 6), indicating that redistributive systems do not directly raise average well-being once other factors are controlled.

Finally, individual poverty shows a clear and robust negative association. Individuals below 60% of the national median income report significantly lower life satisfaction, with an estimated penalty of -0.17 (Column 7). This association persists after controlling for income, highlighting the salience of relative deprivation. These results align with evidence that poverty reduces well-being through material hardship and additional psychosocial costs like stigma, exclusion, and insecurity beyond income itself (OECD, 2020^[22]; 2024^[23]). Poverty alleviation therefore remains central to improving aggregate well-being.

In sum, inequality per se does not have a significant association with life satisfaction, while poverty exerts a strong, unequivocal negative association. Policies to enhance well-being must thus combine poverty reduction with transparent, credible governance to ensure that redistribution translates into genuine improvements in life satisfaction.

Table 4. The regressions with inequality and poverty variables

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Gini (market income)	2.343						
	(1.431)						
Gini market × age 16-19		2.690*					
		(1.361)					
Gini market × age 20-29		3.764**					
		(1.713)					
Gini market × age 30-39		3.558**					
		(1.558)					
Gini market × age 40-49		2.962*					
		(1.510)					
Gini market × age 50-59		2.342					
		(1.483)					
Gini market × age 60-69		1.519					
		(1.446)					
Gini market × age 70-79		0.902					
		(1.417)					
Gini market × age 80-89		1.285					
		(1.878)					
Market income ratio			-0.000				
			(0.000)				
Gini (disposable income)				5.426			
				(3.751)			
Disposable income ratio					0.027		
					(0.064)		
Redistribution ratio						1.247	
						(0.901)	
Individual poverty dummy							-0.168***
							(0.017)
Log of average household disposable income (y)	1.843***	1.841***	1.423**	1.743***	1.447**	1.608**	1.465**
	(0.596)	(0.592)	(0.607)	(0.540)	(0.622)	(0.610)	(0.600)
Log y × young-age	-0.533***	-0.547***	-0.535***	-0.530***	-0.534***	-0.535***	-0.539***
	(0.149)	(0.125)	(0.147)	(0.150)	(0.149)	(0.148)	(0.150)
Log y × middle-age	-0.541***	-0.555***	-0.544***	-0.538***	-0.542***	-0.543***	-0.547***
	(0.149)	(0.124)	(0.147)	(0.150)	(0.149)	(0.148)	(0.149)

Log of individual disposable income	0.454*** (0.039)	0.455*** (0.038)	0.449*** (0.037)	0.450*** (0.037)	0.449*** (0.037)	0.452*** (0.038)	0.378*** (0.036)
Country's unemployment rate	-0.033** (0.013)	-0.034** (0.013)	-0.032** (0.014)	-0.033** (0.016)	-0.034** (0.016)	-0.033** (0.014)	-0.033** (0.015)
Individual unemployment dummy	-0.841*** (0.057)	-0.843*** (0.056)	-0.841*** (0.058)	-0.841*** (0.057)	-0.841*** (0.058)	-0.841*** (0.057)	-0.826*** (0.056)
Controls for gender, age, education, health, isolation and marital status	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	1.6e+06	1.6e+06	1.6e+06	1.6e+06	1.6e+06	1.6e+06	1.6e+06
R2	0.149	0.150	0.148	0.149	0.148	0.149	0.149

Note: Dependent variable is life satisfaction. Market (Disposable) income ratio refers to the ratio of market (disposable) income of the top 20% to the bottom 20%. For country – years in which the mean market income of the bottom 20% is non-positive, the denominator is replaced with a small positive constant ε . Redistribution ratio is calculated as the difference between the market-income Gini and the disposable-income Gini, divided by the market-income Gini. Individual poverty dummy refers to individuals whose income is less than 60% of the country's median income in the EU-SILC (one-year lagged due to the income reference year of the EU-SILC). Robust standard errors are clustered at the country level. ***p < 0.01; **p < 0.05; *p < 0.1.

Source: OECD calculations.

3.3. The Tax-Benefit system and well-being

Individual taxes and transfers

Having established that aggregate redistribution is weakly associated with life satisfaction, the analysis turns to the redistributive role of the individual tax-benefit system. In the Table 5, a household's net tax share is defined as the ratio of “taxes paid – transfers received” to disposable income, as in equation (4) in Section 2.1. Taxes paid include personal income taxes and social insurance contributions. More positive values indicate heavier net burdens, while more negative values reflect larger net benefits. In column (1), where $\log(1+ntx)$ enters as the main regressor, the coefficient is approximately -0.4 and highly significant, suggesting that higher net tax liabilities are associated with lower well-being, conditional on market income. This correlation may capture both the disutility of taxation, and the utility derived from transfers, including non-cash components such as health or housing support.

Columns (2) and (3) examine the heterogeneity of the relationship by income rank. When households are ordered by market income decile (Column 2), the negative association is concentrated in the bottom half of the distribution and becomes insignificant for upper deciles. By contrast, ranking by disposable income yields uniformly negative coefficients across all deciles (Column 3), implying that higher net burdens reduce life satisfaction conditional on post-redistribution income. This pattern suggests that transfers generate substantial satisfaction gains for initially poorer households, while higher-income households experience limited losses, consistent with diminishing marginal utility of income. Higher-income groups may sustain satisfaction despite tax burdens, due to tax morale, the value on public goods, or high residual income.

Columns (4)-(6) explore heterogeneity by gender, age and employment status. The negative correlation holds for both men and women but varies across life stages and labor-market positions. Retirees show the strongest sensitivity, reflecting their dependence on transfer income, while employed individuals appear less affected. These results underscore the role of redistribution in sustaining life satisfaction among vulnerable groups and suggest potential net welfare gains from redistribution, though incentive effects and fiscal constraints remain important considerations.

Finally, the observational patterns correspond with experimental evidence. Dwyer and Dunn (2022^[24]), for example, show that randomly transferring USD 10 000 to low-income individuals increased their life

satisfaction relative to controls, while donors funding the transfers did not report declines. Consistent with these results, the present analysis finds that redistribution improves the life satisfaction of poorer households while leaving richer households' satisfaction largely unaffected.

Table 5. Individual net taxes and life satisfaction

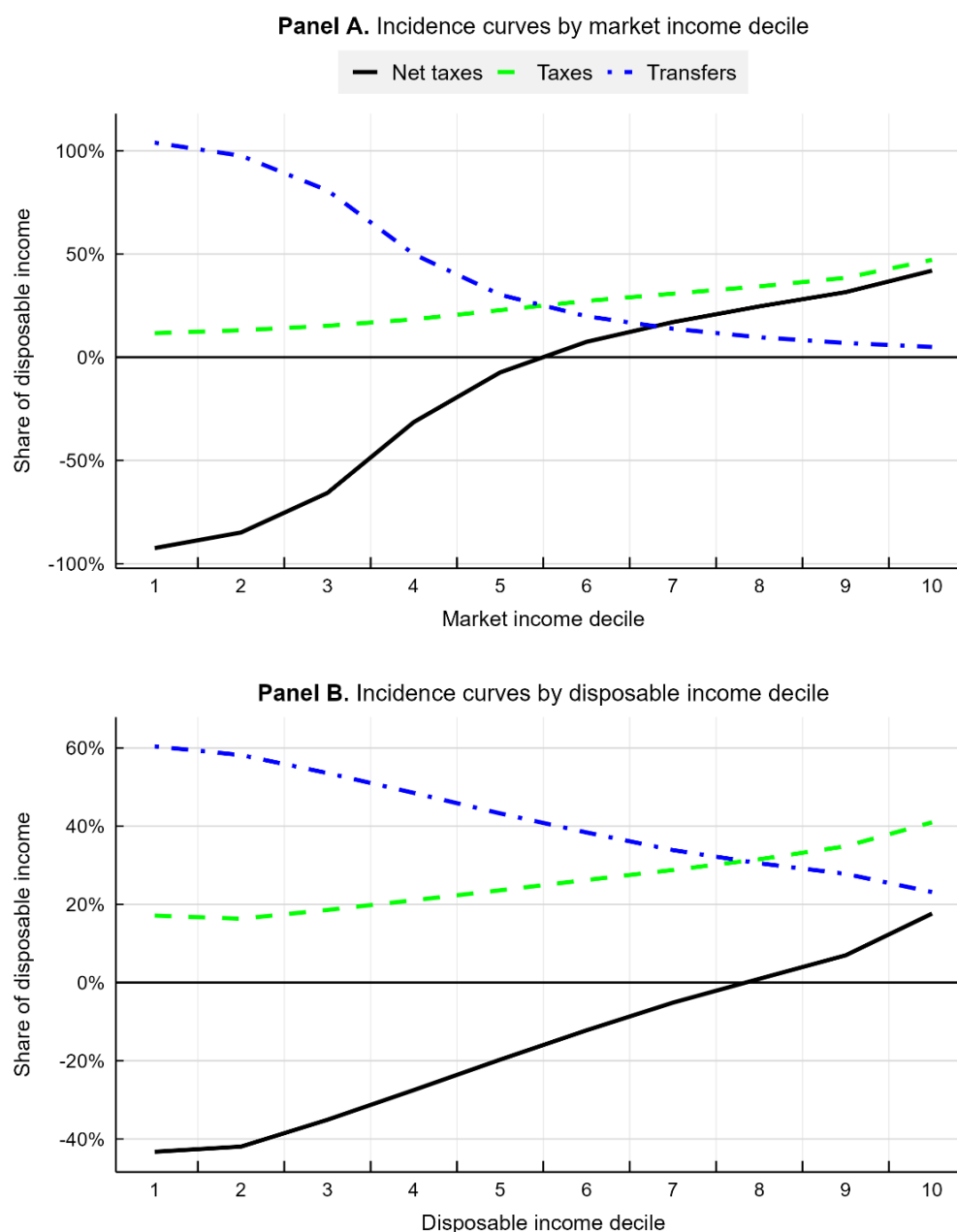
	(1)	(2)	(3)	(4)	(5)	(6)
Log of average household disposable income (y)	1.439** (0.627)	1.452** (0.623)	1.449** (0.626)	1.439** (0.627)	1.420** (0.624)	1.415** (0.626)
Log y × young-age	-0.662*** (0.126)	-0.664*** (0.128)	-0.658*** (0.128)	-0.662*** (0.126)	-0.631*** (0.130)	-0.633*** (0.130)
Log y × middle-age	-0.670*** (0.126)	-0.673*** (0.128)	-0.666*** (0.127)	-0.671*** (0.126)	-0.639*** (0.130)	-0.641*** (0.130)
Log of individual market income	0.421*** (0.028)	0.391*** (0.027)	0.412*** (0.027)	0.421*** (0.028)	0.416*** (0.028)	0.413*** (0.027)
Zero market income dummies	-2.663*** (0.282)	-2.477*** (0.249)	-2.539*** (0.255)	-2.664*** (0.282)	-2.774*** (0.270)	-2.711*** (0.257)
Country's unemployment rate	-0.032** (0.015)	-0.032** (0.015)	-0.032** (0.015)	-0.032** (0.015)	-0.032** (0.015)	-0.032** (0.015)
Individual unemployment dummy	-0.808*** (0.044)	-0.793*** (0.045)	-0.801*** (0.043)	-0.807*** (0.044)	-0.771*** (0.042)	-0.794*** (0.043)
Log of (1 + net taxes share of disposable income) (ntx)	-0.385*** (0.031)					
Log ntx × decile 1 (market income)		-0.352*** (0.028)				
Log ntx × decile 2 (market income)		-0.369*** (0.028)				
Log ntx × decile 3 (market income)		-0.370*** (0.028)				
Log ntx × decile 4 (market income)		-0.330*** (0.028)				
Log ntx × decile 5 (market income)		-0.273*** (0.038)				
Log ntx × decile 6 (market income)		-0.280*** (0.044)				
Log ntx × decile 7 (market income)		-0.157*** (0.046)				
Log ntx × decile 8 (market income)		0.028 (0.045)				
Log ntx × decile 9 (market income)		0.080 (0.053)				
Log ntx × decile 10 (market income)		0.002 (0.091)				
Log ntx × decile 1 (disposable income)			-0.346*** (0.028)			
Log ntx × decile 2 (disposable income)			-0.367*** (0.028)			
Log ntx × decile 3 (disposable income)			-0.377*** (0.028)			
Log ntx × decile 4 (disposable income)			-0.387*** (0.030)			
Log ntx × decile 5 (disposable income)			-0.385*** (0.030)			

Log ntx × decile 6 (disposable income)			-0.389***			
			(0.031)			
Log ntx × decile 7 (disposable income)			-0.399***			
			(0.030)			
Log ntx × decile 8 (disposable income)			-0.396***			
			(0.033)			
Log ntx × decile 9 (disposable income)			-0.387***			
			(0.033)			
Log ntx × decile 10 (disposable income)			-0.374***			
			(0.038)			
Log ntx × male				-0.380***		
				(0.030)		
Log ntx × female				-0.388***		
				(0.031)		
Log ntx × age 16-19					-0.386***	
					(0.036)	
Log ntx × age 20-29					-0.355***	
					(0.037)	
Log ntx × age 30-39					-0.318***	
					(0.036)	
Log ntx × age 40-49					-0.307***	
					(0.032)	
Log ntx × age 50-59					-0.311***	
					(0.031)	
Log ntx × age 60-69					-0.397***	
					(0.029)	
Log ntx × age 70-79					-0.404***	
					(0.029)	
Log ntx × age 80-89					-0.410***	
					(0.033)	
Log ntx × unemployed						-0.355***
						(0.032)
Log ntx × employed						-0.300***
						(0.033)
Log ntx × retired						-0.402***
						(0.028)
Log ntx × disabled						-0.277***
						(0.032)
Log ntx × inactive (others)						-0.370***
						(0.027)
Controls for gender, age, education, health, isolation and marital status	Yes	Yes	Yes	Yes	Yes	Yes
Time dummies	Yes	Yes	Yes	Yes	Yes	Yes
Country dummies	Yes	Yes	Yes	Yes	Yes	Yes
N	1.5e+06	1.5e+06	1.5e+06	1.5e+06	1.5e+06	1.5e+06
R2	0.142	0.143	0.142	0.142	0.143	0.144

Note: Dependent variable is life satisfaction. Robust standard errors are clustered at the country level. ***p < 0.01; **p < 0.05; *p < 0.1.
Source: OECD calculations.

Figure 3 shows incidence curves for taxes, transfers and net taxes by both market income and disposable income deciles. When ranked by market income (Panel A), the poorest deciles receive more transfers than the richer deciles, while the richest pay the bulk of taxes, making net taxes strongly negative at the bottom and positive at the top. When ranked by disposable income (Panel B), these contrasts are compressed, as transfers still decline with income and taxes rise, but the extremes are less pronounced and the overall gradient is flatter. Thus, ranking by market income highlights the raw redistributive effect, whereas ranking by disposable income reflects the smoothed, post-redistribution distribution of burdens and benefits.

Figure 3. Incidence curves of transfers, taxes and net taxes share of income by income decile



Note: The Incidence Curve (IC) of taxes = taxes / disposable income. IC of transfers = transfers / disposable income. IC of net taxes = (taxes – transfers) / disposable income.

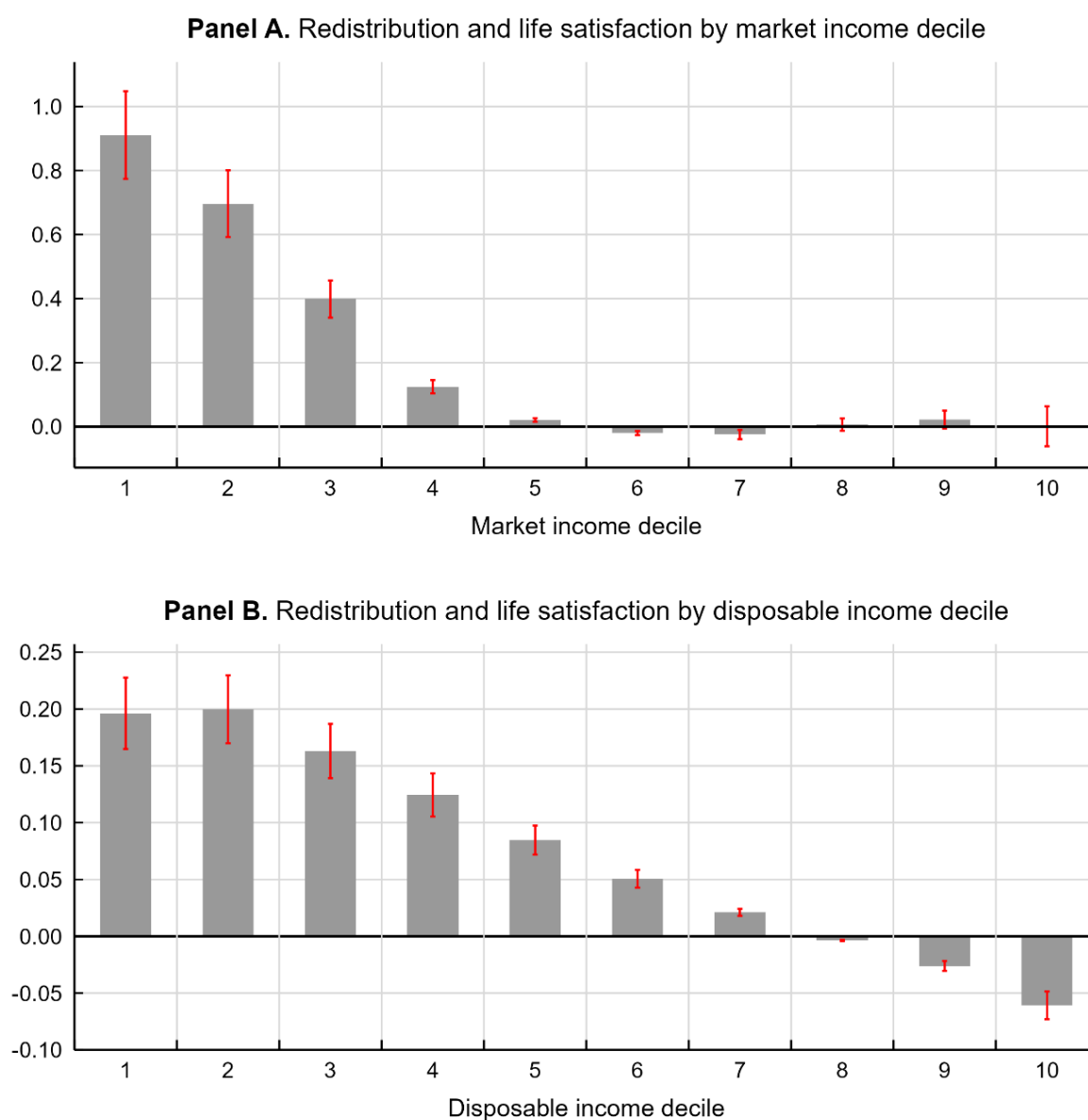
Source: OECD calculations.

Figure 4 illustrates that redistribution is most strongly associated with higher life satisfaction among poorer households. This is shown by calculating the associations of redistribution by income decile, obtained by multiplying each decile's average net taxes by the corresponding coefficients from columns (2) and (3) of Table 5 (See Figure A A.1 for country-specific results). When households are ranked by market income (Panel A), life satisfaction gains are concentrated in the bottom four deciles, particularly among the poorest, where increases of about 0.8-1.0 points are observed, while middle and upper deciles display little change. When ranked by disposable income (Panel B), life satisfaction benefits appear more evenly spread across the lower seven deciles as net beneficiaries, although smaller in magnitude, while slight negative associations emerge for the richest groups as net taxpayers.

The tax-benefit system thus shows measurable correlations with individual life satisfaction: net transfers are linked to greater reported life satisfaction, while net taxes are linked to lower reported happiness, conditional on market income. In the market-income decile analysis, the strongest negative associations of net taxes are observed among lower-income groups, whereas the highest deciles show little sensitivity despite paying larger amounts. These findings highlight the centrality of social insurance mechanisms, such as unemployment benefits and pensions, in sustaining the well-being of vulnerable groups.

At the same time, the disposable-income decile analysis reveals that higher-income groups also display reductions in reported life satisfaction from redistribution (Panel B), even though households in comparable higher market-income deciles did not exhibit such patterns (Panel A). This difference suggests that there may be limits to the burden that can be placed on richer groups without diminishing their well-being. From this perspective, redistribution policies may need to balance the reported life satisfaction gains of poorer households with the reported losses among higher-income groups, implying the possibility of an optimal redistribution level that maximises overall societal life satisfaction.

Figure 4. Redistribution and life satisfaction by income decile



Note: The associations between redistribution and life satisfaction by income decile are calculated by multiplying each decile's average net taxes by the corresponding coefficients from columns (2) and (3) of Table 5. The red lines represent the 95% confidence intervals for each estimate. Source: OECD calculations.

Aggregate taxes and transfers conditional on individual net taxes

The preceding analysis has focussed on individual net tax positions. Table 6 extends the perspective to cross-country differences in fiscal structure and their relation to life satisfaction. In columns (1), the tax burden (country-level tax revenue as a share of GDP) is negatively associated with life satisfaction (-0.05), whereas the generosity of welfare transfers, measured as the average household transfer share of disposable income, is positively associated (+0.02). These findings suggest that larger social safety nets are linked with higher life satisfaction, while heavier tax burdens are associated with lower life satisfaction. The sign of the association between taxation and subjective well-being is intuitively negative as taxes reduce income and hence life satisfaction. Moreover, as the framework controls for both transfers and taxes, the tax burden does not capture the generosity of social safety nets. The tax coefficient is more than twice the magnitude of the transfer coefficient, implying that life satisfaction gains from redistribution may be partly offset by the disutility of high taxation. This underscores the importance of effective targeting and efficient allocation of fiscal resources.

Governance quality emerges as a key factor in this regard. As assessed from previous studies, individuals are more accepting of high taxes when they trust others or have confidence in government (Algan, Cahuc and Sangnier, 2016^[25]), translating the notion that citizens appreciate the value of public services and goods provided by the state. Similarly, Oishi, Schimmack and Diener (2012^[10]) found that the positive relationship between life satisfaction and progressive taxation is mediated by citizens' satisfaction with public goods. In practice, Columns (2-4) incorporate interaction terms with three governance quality variables, namely perceived corruption, co-ordination failure and quality of public service. In all cases, the negative association of tax burden with life satisfaction is amplified when governance quality is lower, and conversely, higher governance quality mitigates the adverse effect of taxation. To examine the direct association between governance quality and life satisfaction, column (5) includes government effectiveness itself. The results show it is positively associated with life satisfaction, and that the coefficient on its interaction with taxation is estimated more precisely.

In column (6), the country's tax burden is decomposed into its components. Among these, only income taxes exhibit a statistically significant negative association with life satisfaction, suggesting that individuals may perceive greater disutility from income taxation than from other forms of taxation. One potential explanation is that different taxes vary in their visibility and perceived burden, and taxpayers' responses may depend on the salience of the tax burden (Chetty, Looney and Kroft, 2009^[26]), and tax – benefit linkages in social insurance can connect SSCs to entitlement to specific benefits, potentially reducing the perceived burden when SSCs are viewed as “deferred wages” or insurance premiums rather than distortionary taxes (Disney, Boeri and Jappelli, 2004^[27]; Bozio, Breda and Grenet, 2019^[28]).

Column (7) includes the primary balance and public debt to examine their fiscal associations with subjective well-being. While the primary balance is statistically insignificant, public debt, reflecting past transfers and overlooked future taxation, is positively and significantly associated with life satisfaction. Column (8) shows that this relationship is conditional on the quality of governance, with life satisfaction gains from public debt diminishing and reversing in countries with low government effectiveness. These findings are consistent with the interpretation of Kang and Rhee (2024^[29]), who argue that debt enhances or undermines life satisfaction depending on whether citizens trust governments to use it effectively and sustainably.

Overall, these results indicate that the institutional context strongly conditions the relationship between taxation and life satisfaction. High taxes in high-quality-service settings (e.g. Scandinavian countries) do not generate the dissatisfaction observed in opposite environments. Likewise, the relationship between public debt and life satisfaction depends on government effectiveness.

Table 6. Aggregate and individual net taxes and life satisfaction

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Country's tax revenue share of GDP (Tax)	-0.052** (0.023)	-0.046** (0.022)	-0.053** (0.022)	-0.038* (0.019)	-0.044* (0.023)		-0.048** (0.019)	-0.055** (0.020)
Tax × Corruption in government		-0.031* (0.018)						
Tax × VAT compliance gap			-0.023** (0.011)					
Tax × Government Effectiveness				0.043*** (0.010)	0.038*** (0.011)	0.043*** (0.012)	0.043*** (0.009)	0.037*** (0.008)
Government Effectiveness					0.364** (0.141)	0.367*** (0.124)	0.346** (0.142)	0.428*** (0.152)
Country's income tax revenue share of GDP						-0.049** (0.019)		
Country's SSC revenue share of GDP						-0.068 (0.051)		
Country's consumption tax revenue share of GDP						0.038 (0.040)		
Country's other revenue share of GDP						-0.052 (0.038)		
Average household transfer share of income (Transfer)	0.019** (0.008)	0.020** (0.008)	0.020** (0.009)	0.021** (0.008)	0.020** (0.008)	0.019** (0.008)	0.018** (0.008)	0.018** (0.008)
Country's primary balance share of GDP							0.010 (0.013)	0.011 (0.012)
Country's debt share of GDP (Debt)							0.006** (0.003)	0.007** (0.002)
Debt × Government Effectiveness								0.005* (0.003)
Log of average household disposable income (y)	1.426** (0.525)	1.404*** (0.486)	1.705*** (0.585)	1.584*** (0.381)	1.463*** (0.279)	1.436*** (0.209)	1.741*** (0.283)	1.490*** (0.261)
Log y × young-age	-0.660*** (0.127)	-0.659*** (0.127)	-0.578*** (0.105)	-0.659*** (0.127)	-0.654*** (0.128)	-0.652*** (0.129)	-0.654*** (0.127)	-0.653*** (0.127)
Log y × middle-age	-0.668*** (0.126)	-0.667*** (0.127)	-0.586*** (0.105)	-0.667*** (0.127)	-0.662*** (0.128)	-0.660*** (0.129)	-0.662*** (0.126)	-0.661*** (0.127)
Log of individual market income	0.380*** (0.033)	0.380*** (0.033)	0.383*** (0.034)	0.381*** (0.033)	0.380*** (0.033)	0.381*** (0.035)	0.382*** (0.034)	0.382*** (0.034)
Zero market income dummies	-2.325*** (0.303)	-2.326*** (0.304)	-2.358*** (0.312)	-2.322*** (0.304)	-2.314*** (0.305)	-2.317*** (0.304)	-2.323*** (0.309)	-2.319*** (0.305)
Log of (1 + net taxes share of disposable income)	-0.341*** (0.035)	-0.341*** (0.035)	-0.345*** (0.036)	-0.341*** (0.035)	-0.341*** (0.035)	-0.341*** (0.036)	-0.343*** (0.036)	-0.342*** (0.036)
Country's unemployment rate	-0.046** (0.017)	-0.054*** (0.017)	-0.047** (0.018)	-0.054*** (0.018)	-0.057*** (0.017)	-0.053*** (0.016)	-0.049*** (0.013)	-0.050*** (0.013)
Individual unemployment dummy	-0.797*** (0.043)	-0.797*** (0.043)	-0.792*** (0.042)	-0.796*** (0.043)	-0.796*** (0.043)	-0.797*** (0.043)	-0.796*** (0.043)	-0.796*** (0.043)
Individual poverty dummy	-0.114*** (0.019)	-0.113*** (0.019)	-0.115*** (0.020)	-0.113*** (0.019)	-0.114*** (0.019)	-0.114*** (0.020)	-0.112*** (0.020)	-0.113*** (0.020)
Controls for gender, age, education, health, isolation and marital status	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	1.5e+06	1.5e+06	1.4e+06	1.5e+06	1.5e+06	1.5e+06	1.5e+06	1.5e+06
R2	0.143	0.143	0.141	0.143	0.144	0.144	0.144	0.144

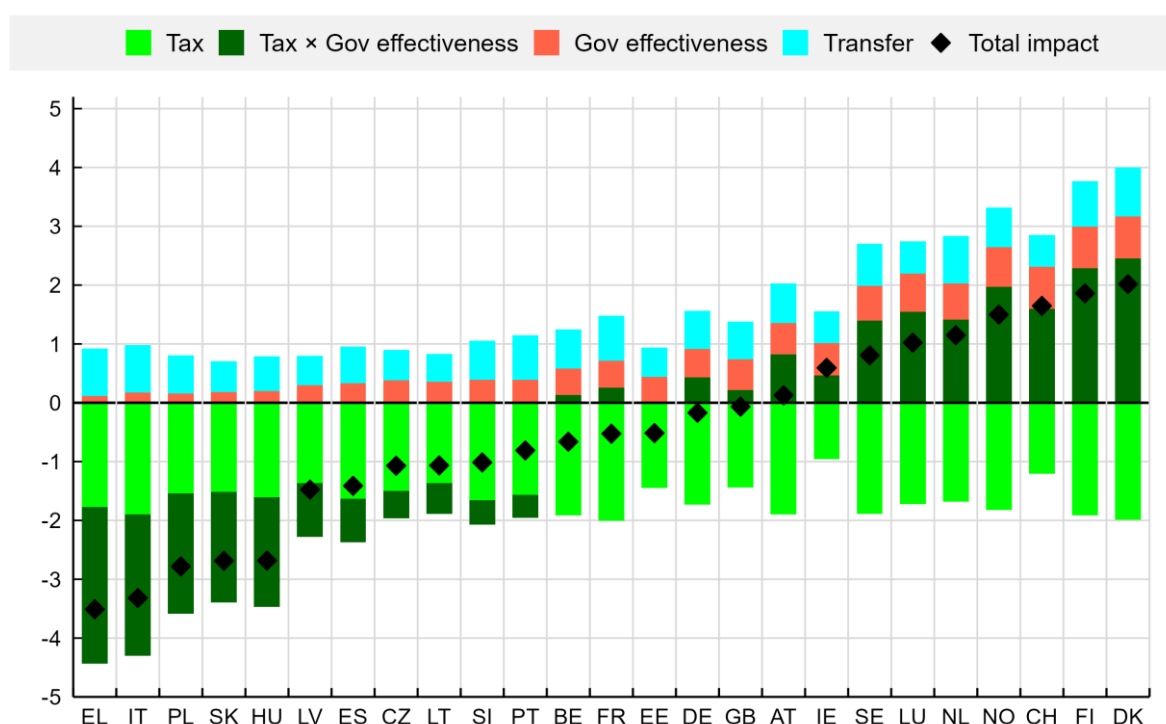
Note: Dependent variable is life satisfaction. Country's tax revenue (primary balance and debt) refers to general government tax revenue (primary balance and debt). Average household transfer share of disposable income refers to the average transfer share of disposable income by country. The VAT compliance gap is the estimated difference between potential VAT revenue under full compliance and the actual amount collected by tax authorities (this EU dataset does not include Norway and Switzerland). Corruption in government, VAT compliance gap and government effectiveness used in interactions with Tax and Debt are averaged over years and standardised to facilitate coefficient interpretation. Robust standard errors are clustered at the country level. ***p < 0.01; **p < 0.05; *p < 0.1.

Source: OECD calculations.

Figure 5 plots the associations between macro-level taxes, transfers and individual life satisfaction by country, based on the estimates in the Column (5) of Table 6. Results show marked heterogeneity: in high-public-service countries with large welfare states (e.g. Nordics), high tax burdens tend to be offset by extensive transfers and high quality of public services, producing neutral or positive net associations. By contrast, in countries with lower quality of public services (e.g. Italy, Greece), predicted associations are negative. Countries with both lower taxes and transfers display small associations, positive or negative depending on the balance between reduced burdens and under-provision of benefits.

Overall, the results highlight that the net life satisfaction association of country's fiscal systems depends on institutional context as much as size. High-tax but high-public-service countries achieve near-zero or positive associations, while high-tax and low-public-service settings experience declines in life satisfaction. This pattern is consistent with evidence that governance quality is a key determinant of the relationship between governance and subjective well-being (Helliwell, Huang and Wang, 2016^[30]).

Figure 5. Macro-level taxes, transfers and life satisfaction across countries



Note: The associations between macro-level taxes, transfers, government effectiveness and life satisfaction by country are calculated by multiplying each country's average of each variable by the corresponding coefficients from columns (5) of Table 6.

Source: OECD calculations.

4 Case studies

This section examines the policy simulation as a case study. Table 7 reports the simulated effects of a 10% increase in each selected transfer on life satisfaction across countries, counterbalanced by a corresponding increase in taxes. The results are derived by applying the country-specific average changes in relevant variables to the estimated coefficients from the final regression (Column 5, Table 6). The relevant variables channelling the impacts are individual net tax share of income, relative poverty, country's tax burden, tax burden with government effectiveness, and the average transfer share of income. Tax variables are increased uniformly across households to offset the additional expenditures from higher transfers, leaving average disposable income unchanged at the country level.

Overall, the effects are heterogeneous across both transfer types and countries. Old-age benefits show the strongest positive association with life satisfaction in most countries, with particularly pronounced effects observed in Northern Europe. Across all countries, raising old-age benefits by 10% would be equivalent in welfare terms to an increase in disposable income by around 1.2 p.p. This result partly reflects the relatively large size of pension payments compared with other transfers, as well as their broader population coverage. Unemployment, disability benefits and family allowance also tend to exhibit modest positive effects in many countries, although negative coefficients are observed in several Southern and Central and Eastern European economies. In contrast, survivor, education, social and housing allowances generally display weak or negative associations with life satisfaction, partly due to small population coverage of those benefits.

It is also striking that countries differ significantly by the magnitude of life satisfaction impacts implied by these combined policy reforms. If all effects were added up, subjective well-being would increase in Switzerland, Denmark, Finland, the Netherlands and Norway in a way that represents more than 7 p.p. of disposable income growth. Conversely, subjective well-being would decrease in Greece, Spain, Hungary, Italy, Latvia, Poland and the Slovak Republic.

Table 7. Monetised impacts on life satisfaction from a 10% increase in each selected transfer balanced with increased taxed

	Unemployment benefit	Old-age benefit	Survivor benefit	Sickness benefit	Disability benefit	Education benefit	Family allowance	Social allowance	Housing allowance	Total
AT	0.30	2.70	0.28	0.08	0.19	0.03	0.44	0.09	0.09	4.19
BE	0.36	1.43	0.04	0.08	0.28	0.02	0.23	0.07	0.02	2.53
CH	0.37	4.83	0.23	0.06	0.65	0.05	0.47	0.43	0.03	7.11
CZ	0.03	0.40	0.04	0.02	0.07	0.01	0.05	0.02	0.02	0.66
DE	0.18	1.97	0.16	0.04	0.13	0.03	0.32	0.03	0.09	2.95
DK	1.35	6.07	0.02	0.18	1.07	0.75	0.30	0.06	0.31	10.10
EE	0.08	1.21	0.01	0.07	0.26	0.03	0.24	0.01	0.01	1.92
EL	-0.10	-5.38	-0.60	0.02	-0.18	0.03	-0.10	-0.07	0.03	-6.36
ES	0.05	-0.25	-0.02	0.01	-0.01	0.01	0.01	0.02	0.01	-0.17
FI	0.94	5.84	0.43	0.10	0.77	0.18	0.34	0.13	0.47	9.21
FR	0.23	2.18	0.12	0.02	0.11	0.02	0.16	0.15	0.12	3.10

GB	0.06	1.88	0.05	0.01	0.13	0.01	0.25	0.10	0.15		2.62
HU	-0.03	-2.58	-0.08	-0.03	-0.16	-0.01	-0.31	-0.01	0.00		-3.23
IE	0.63	1.72	0.05	0.06	0.33	0.06	0.55	0.01	0.16		3.56
IT	-0.33	-3.95	-0.55	0.00	-0.17	-0.03	-0.06	-0.06	0.00		-5.15
LT	0.03	0.17	0.02	0.00	0.03	0.00	0.04	0.03	0.01		0.32
LU	0.36	3.97	0.09	0.14	0.28	0.11	0.48	0.12	0.05		5.59
LV	-0.05	-0.38	0.00	-0.06	-0.04	-0.01	-0.08	0.01	0.01		-0.59
NL	0.25	5.06	0.01	0.07	0.61	0.08	0.20	0.61	0.24		7.12
NO	0.23	4.20	0.02	0.52	1.68	0.18	0.41	0.13	0.04		7.40
PL	-0.03	-3.39	-0.24	0.00	-0.25	0.00	-0.32	0.00	0.01		-4.21
PT	0.08	0.37	0.07	0.03	0.05	0.03	0.06	0.03	0.02		0.74
SE	0.28	4.11	0.04	0.35	0.30	0.41	0.35	0.14	0.17		6.14
SI	0.04	0.46	0.10	0.03	0.08	0.01	0.06	0.07	0.01		0.85
SK	-0.03	-2.31	-0.17	-0.05	-0.33	0.00	-0.25	-0.01	0.01		-3.13
Av.	0.21	1.21	0.00	0.07	0.24	0.08	0.15	0.08	0.08		2.13

Note: The impacts of a 10% increase in each selected transfer on life satisfaction are calculated by multiplying each country's average simulated change in the respective variables by the corresponding coefficients reported on column (5) of Table 6. The changes in average life satisfaction are expressed in equivalent changes in average disposable income, using the elasticity 1.027 reported on column (3) of Table 2.

Source: OECD calculations.

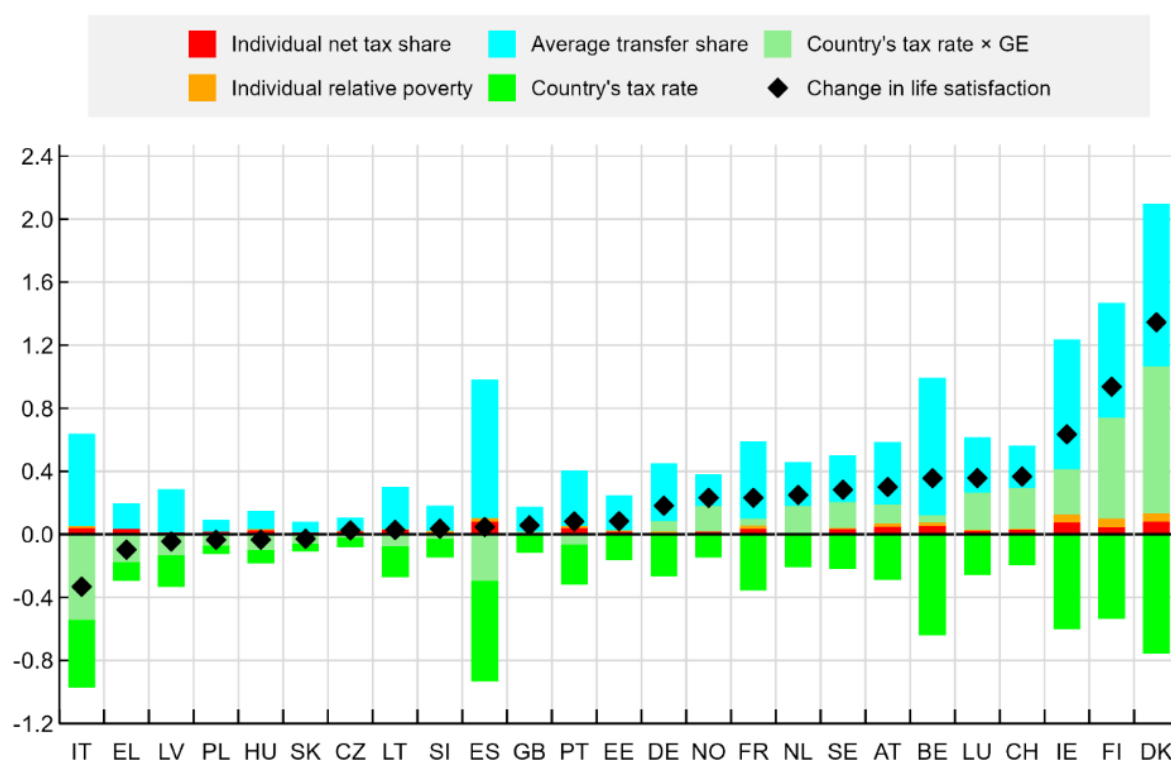
Figure 6 decomposes the impacts on life satisfaction into the respective contributions of simulated changes in each variable across countries (An example of unemployment benefits is shown. See the simulations of the other transfers in Figure A A.2). At the macro level, an increase in each type of transfer raises the average transfer share of disposable income across countries contributing positively to life satisfaction, while such increases also lead to higher overall tax burdens. In countries where the government effectiveness is high, the negative correlation of taxation is mitigated or even offset, implying again that higher transfers would be associated with greater overall subjective well-being in such countries.

At the individual level, the net tax share of disposable income tends to show positive correlations with life satisfaction across transfer types and countries, although the magnitudes of these effects are relatively modest compared with the macro-level impacts of transfers and taxation. Relative poverty indicators do not show strong association for any type of benefit, but they generally display a positive correlation with subjective well-being through income gains among low-income households.

However, it should be noted that this analysis does not account for the broader social impacts of increase in benefits beyond income redistribution, for instance, the potential increase in unemployment resulting from an increased unemployment benefit. Incorporating such effects could change the association with life satisfaction. In any case, the findings suggest that the relationship between the expansion of benefit policies and life satisfaction differs substantially across countries.

Figure 6. Contributions of 10% increase in selected transfer on life satisfaction across countries

The impact of 10% increase in unemployment benefits on life satisfaction



Note: The contributions of a 10% increase in each selected transfer on life satisfaction are calculated across countries by multiplying each country's average simulated change in the respective variables by the corresponding coefficients reported in column (5) of Table 6. The impacts on life satisfaction are expressed in equivalent changes in disposable income, using the elasticity 1.027 reported on column (3) of Table 2.

Source: OECD calculations.

5 Discussion

This paper contributes to a growing literature that seeks to link fiscal policy to subjective well-being by combining micro-level survey data with macro-institutional indicators. The findings suggest systematic associations between tax-benefit structures and life satisfaction across European countries, in particular that individual net beneficiaries tend to report higher life satisfaction, while higher tax burdens are negatively correlated with life satisfaction, conditional on governance quality. These patterns are intuitively consistent with the idea that redistribution and institutional context jointly shape perceived well-being.

At the same time, the results should be interpreted with caution. The empirical strategy relies on within-country variation in a two-way fixed effects framework, which limits the ability to draw causal inferences. Changes in tax-benefit systems are likely endogenous to broader economic, political, and institutional dynamics that also directly influence life satisfaction. As a result, the estimated coefficients are best understood as conditional correlations rather than structural parameters.

Several modelling choices further affect interpretation. Combining taxes and transfers in individual-level variables imposes symmetry between conceptually distinct policy instruments and may mask heterogeneous effects across different types of benefits or tax instruments. Additionally, the policy simulation exercise illustrates the potential magnitude of well-being effects from hypothetical reforms, but it relies on some assumptions. In particular, it abstracts from behavioural responses, general equilibrium effects, and the non-linear structure of tax – benefit systems.

Future research could strengthen the evidence base by integrating microsimulation tools such as EUROMOD (Jara and Schokkaert, 2017^[31]), exploiting richer panel structures, and allowing for more flexible modelling of tax-benefit instruments. Such extensions could help move from associations toward a more structural understanding of how fiscal policies shape subjective well-being.

6 Conclusion

This study examined how income, unemployment, inequality, poverty, and redistributive tax-transfer policies are associated with subjective well-being across European countries. Several patterns stand out. The income is positively correlated with life satisfaction at both the individual and aggregate level. Unemployment, by contrast, is negatively associated strongly with life satisfaction, with estimated losses comparable to those from a substantial decline in income. While overall inequality is not systematically related to average life satisfaction, relative poverty at the individual level is consistently associated with lower life satisfaction, underscoring the central importance of poverty alleviation.

Individual redistribution through taxes and transfers is positively associated with individual life satisfaction. Net beneficiaries report higher life satisfaction, while net contributors show only modest declines. The asymmetry between the large life satisfaction gains of poorer households and the small losses of richer ones suggests that progressive redistribution increases aggregate subjective well-being, though overall tax burdens remain negatively associated with life satisfaction. However, the analysis shows that the negative associations of overall tax burden are mitigated or offset by higher quality of public service. These results highlight the importance of targeting transfers effectively and ensuring that taxation is perceived as meaningful, fair and transparent.

Overall, the evidence indicates that well-designed redistributive policies, combining progressive taxation, and high-quality public services, are linked to higher societal subjective well-being by easing poverty and unemployment without significantly reducing the life satisfaction of the wealthy. In the context of rising inequality, transparent and efficient redistribution remains a critical tool for sustaining both life satisfaction and social cohesion.

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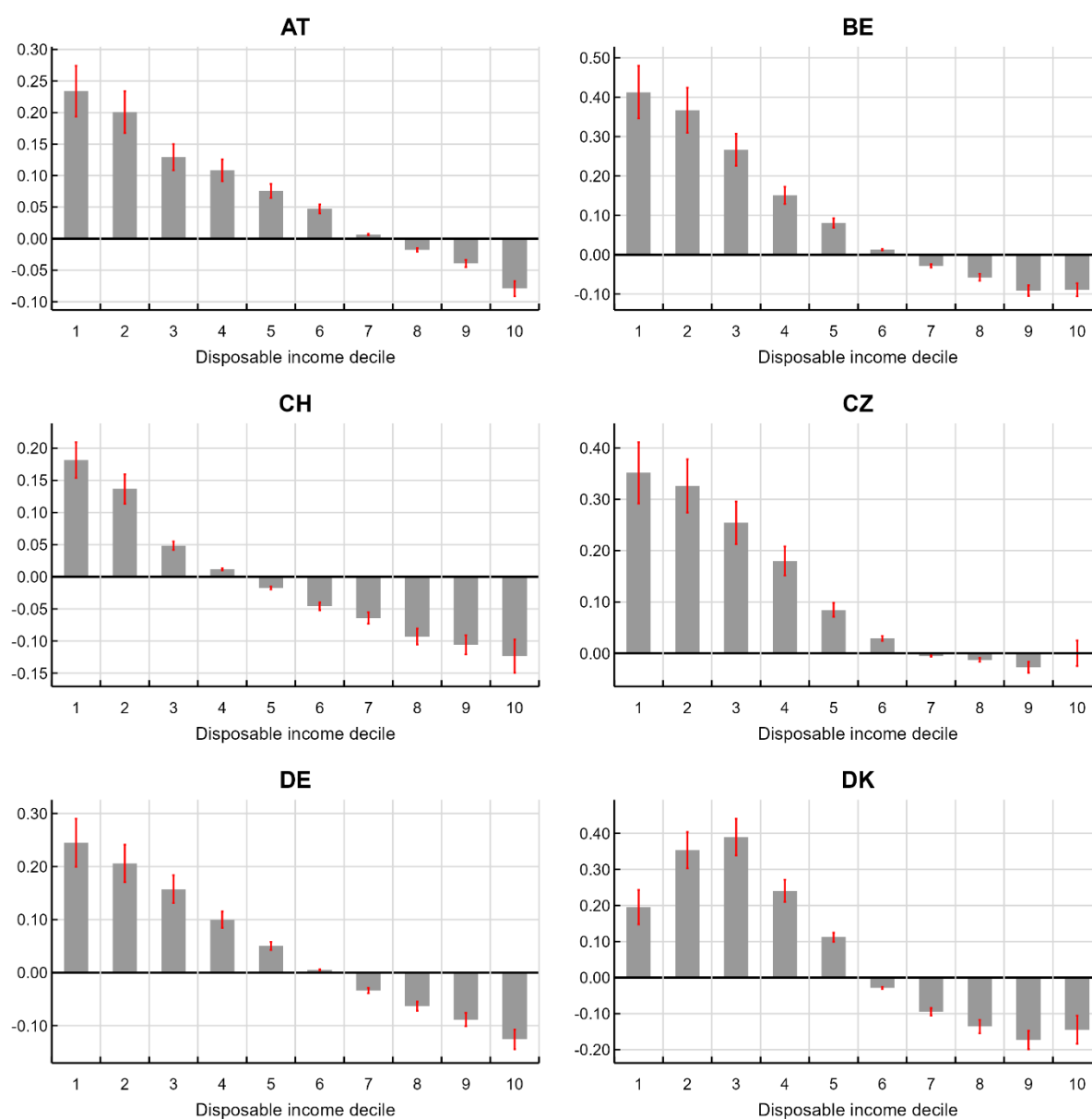
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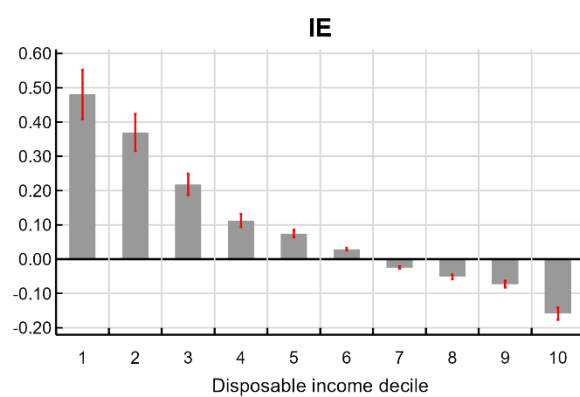
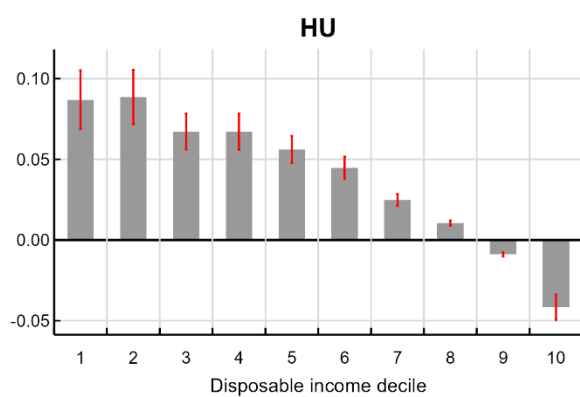
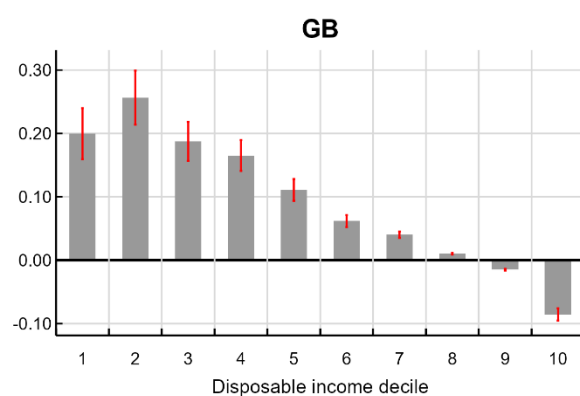
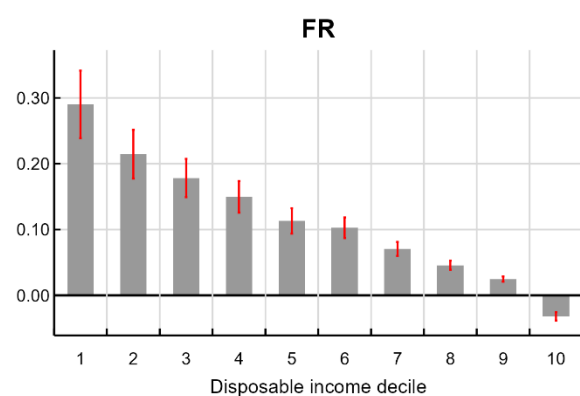
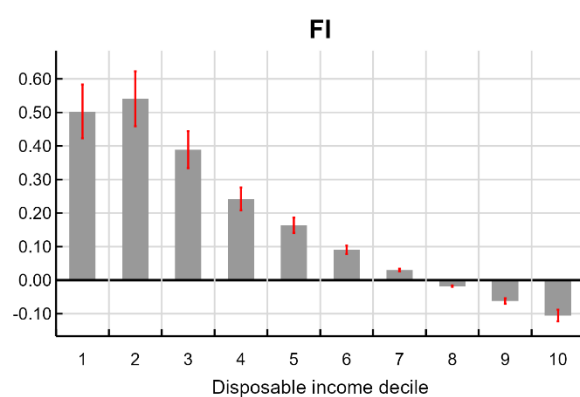
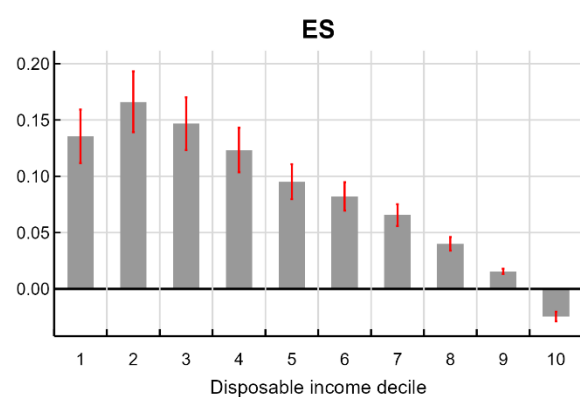
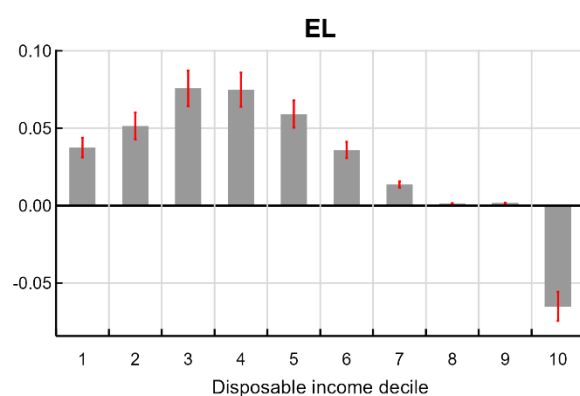
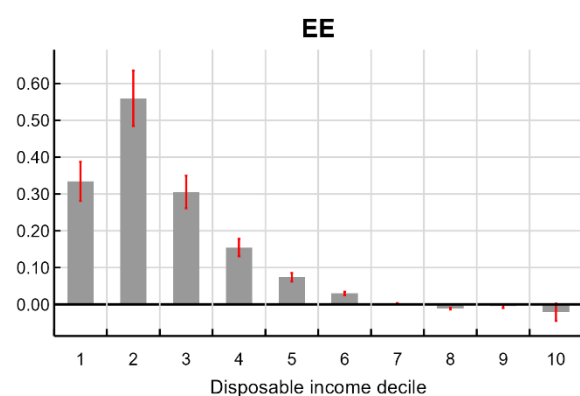
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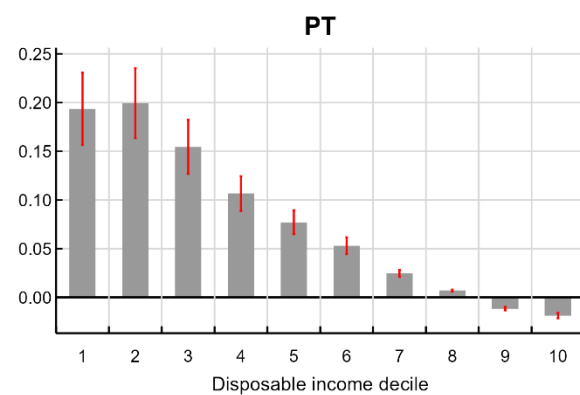
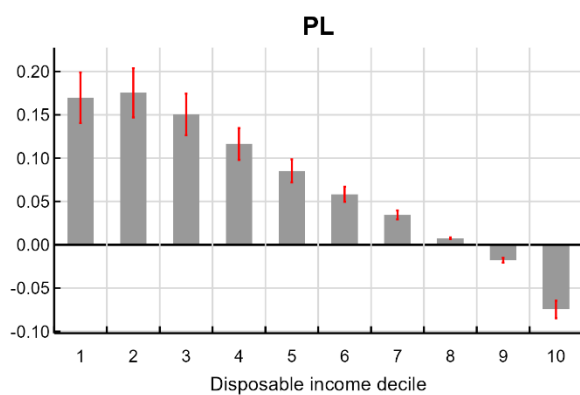
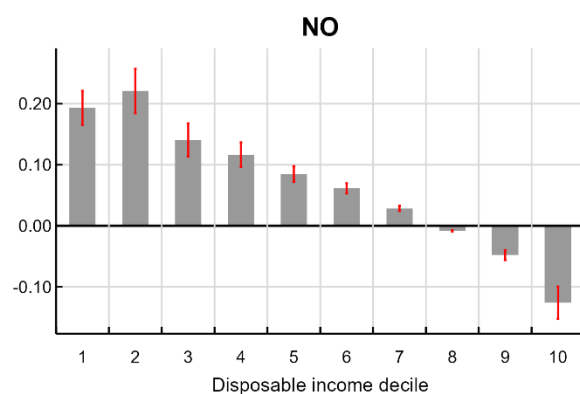
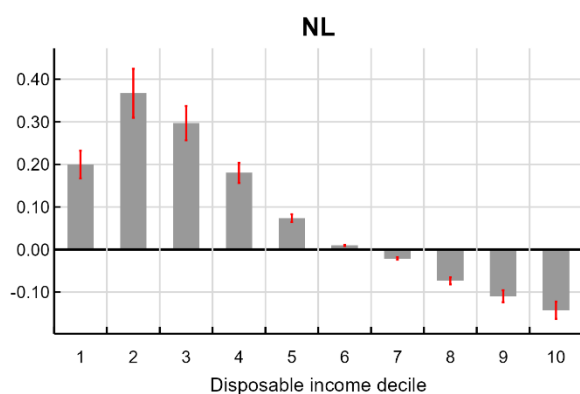
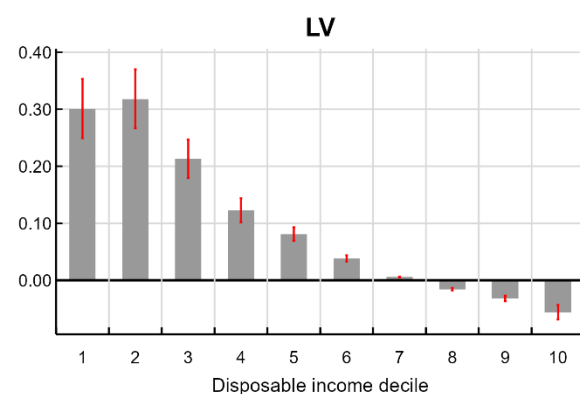
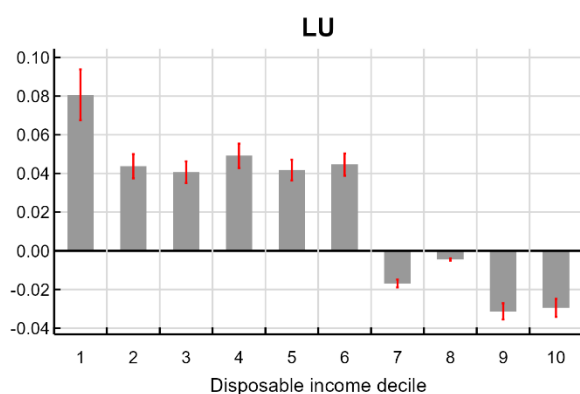
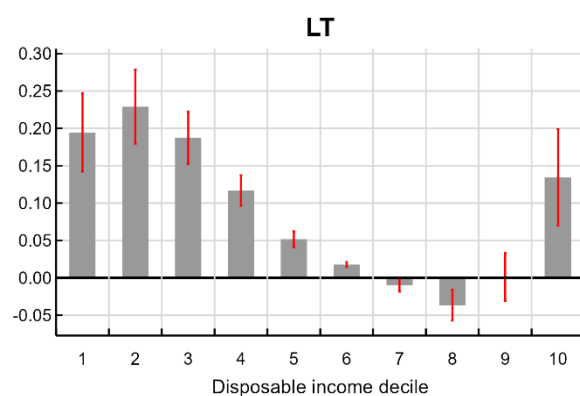
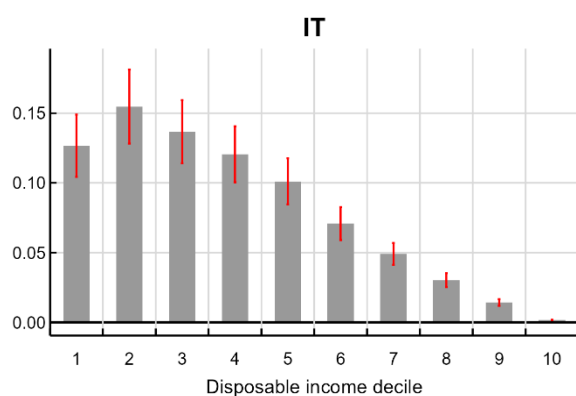
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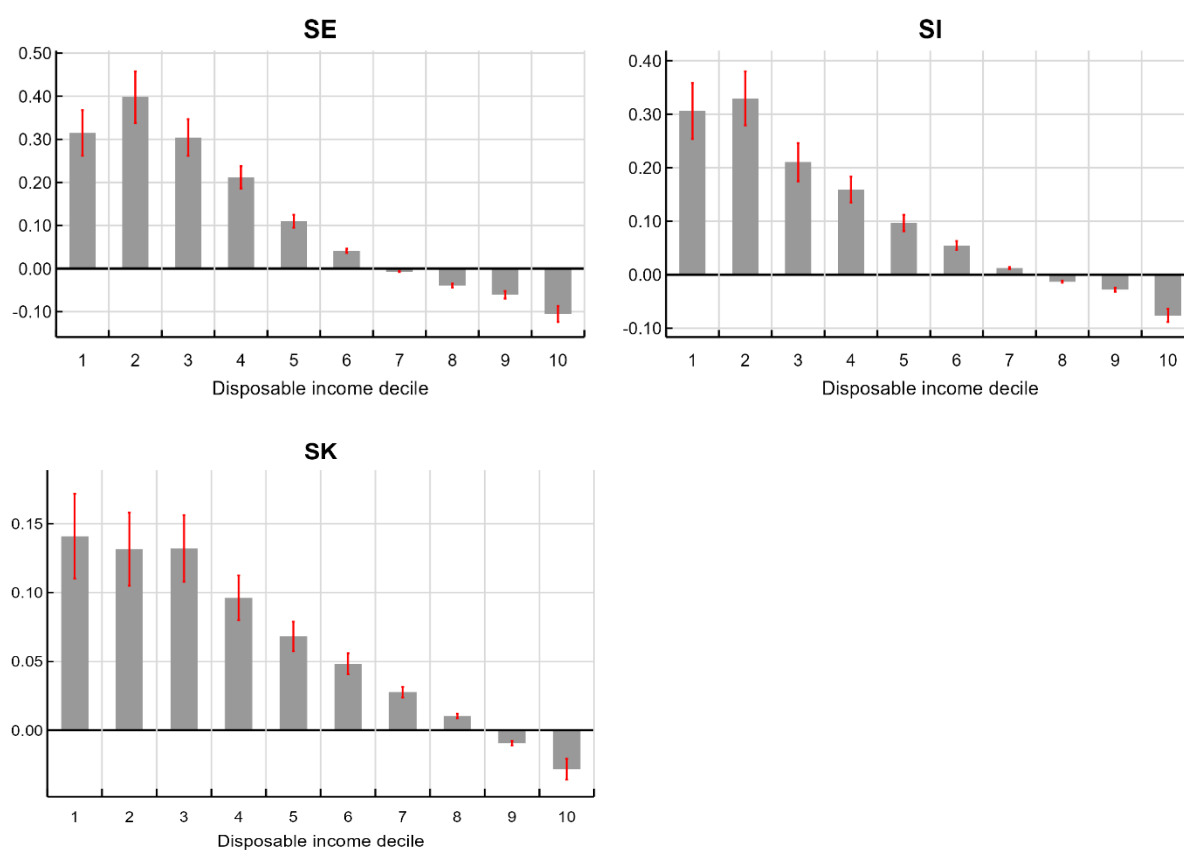
Annex A. Additional results

Figure A A.1. Redistribution and life satisfaction by disposable income decile (per country)





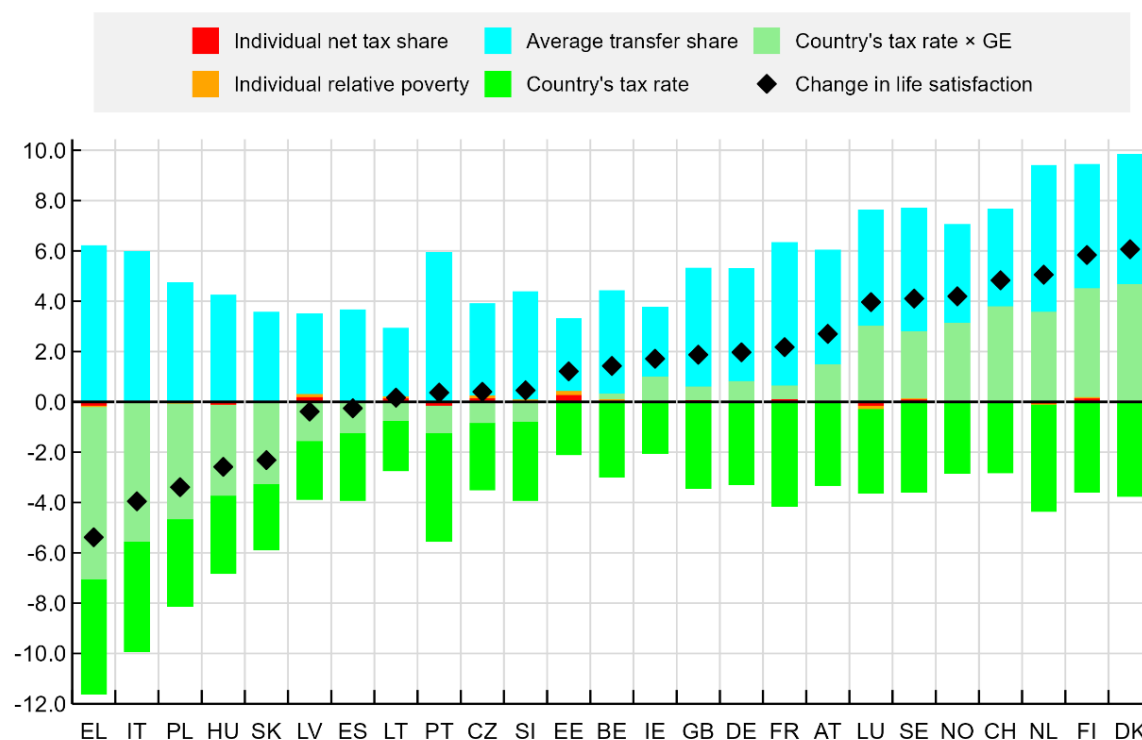




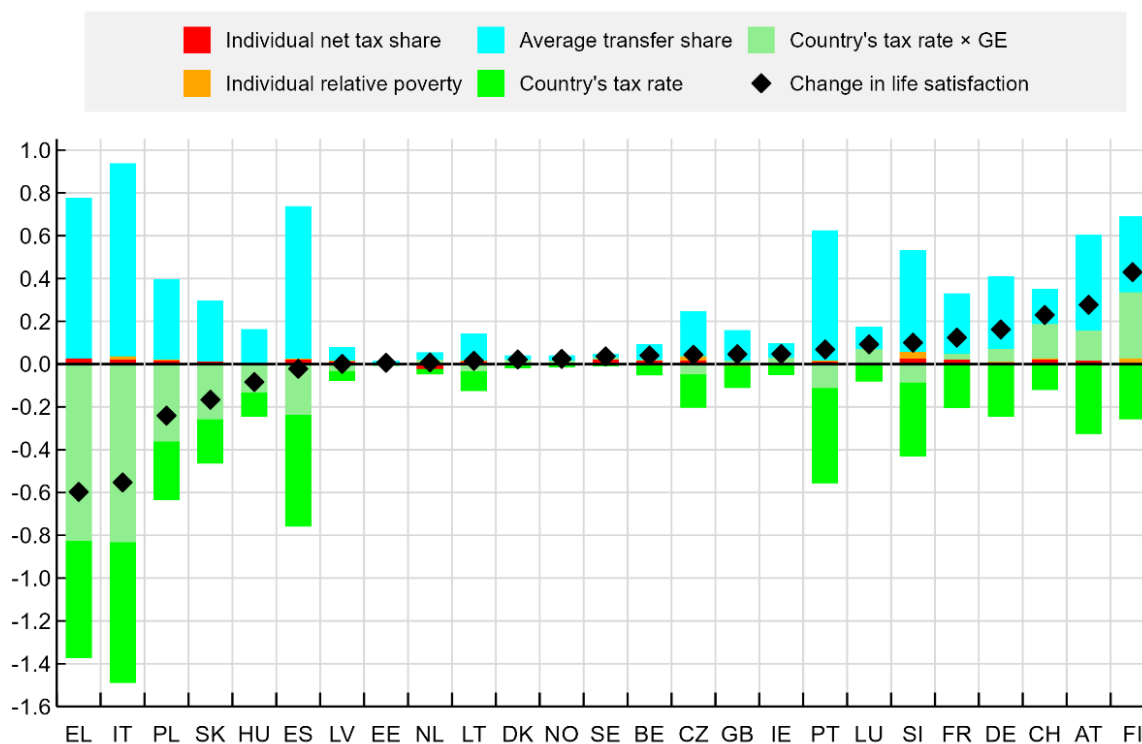
Note: The associations between redistribution and life satisfaction by income decile are calculated by multiplying each decile's average net taxes by the corresponding coefficients from column (3) of Table 5. The red lines represent the 95% confidence intervals for each estimate.
Source: OECD calculations.

Figure A A.2. Contributions of 10% increase in selected transfer on life satisfaction across countries (Continued from Figure 6)

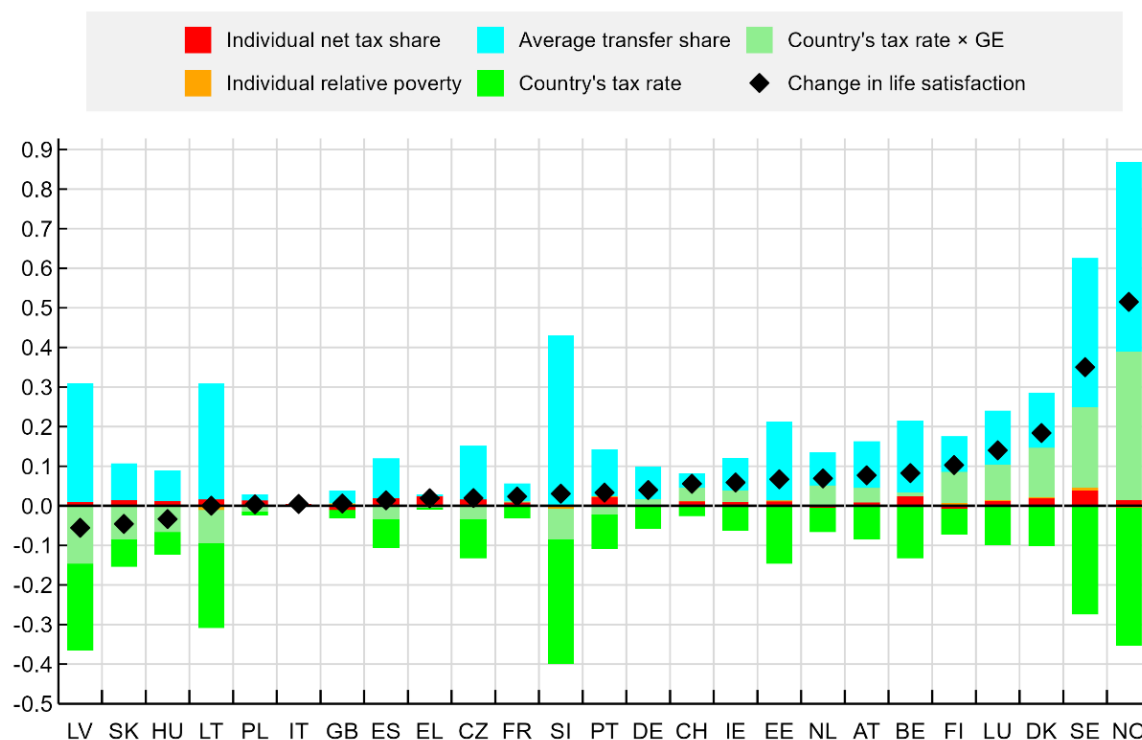
The impact of 10% increase in old-age benefits (pension) on life satisfaction



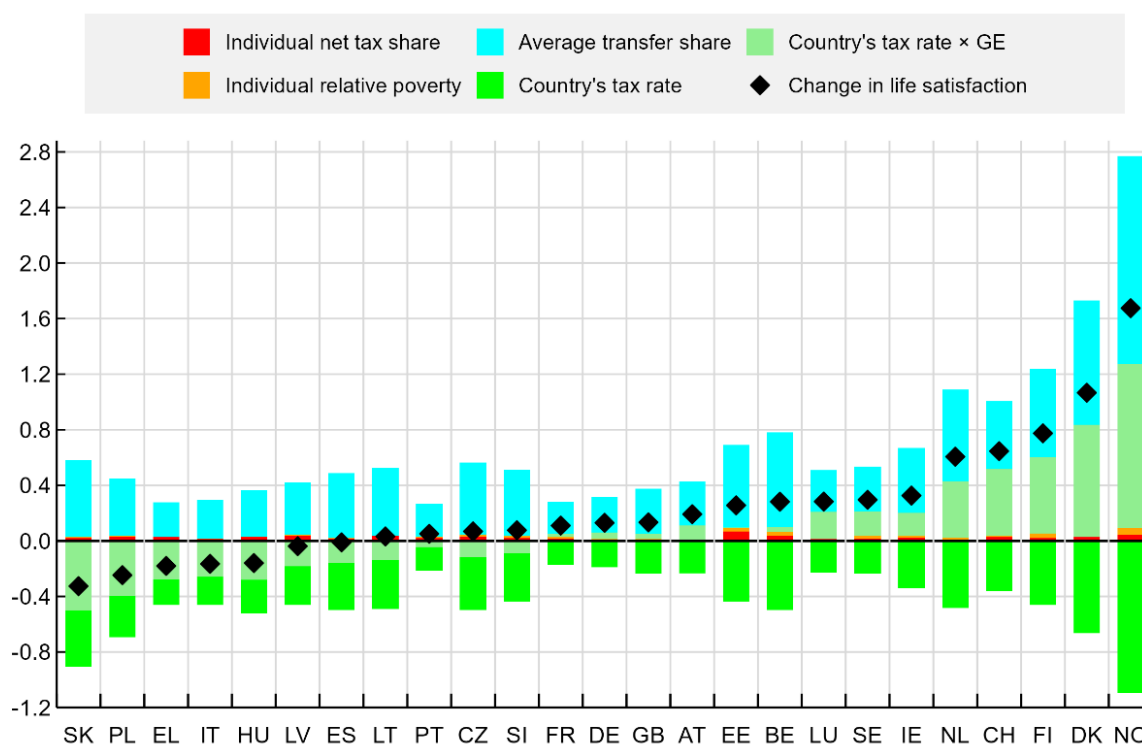
The impact of 10% increase in survivors' benefits on life satisfaction



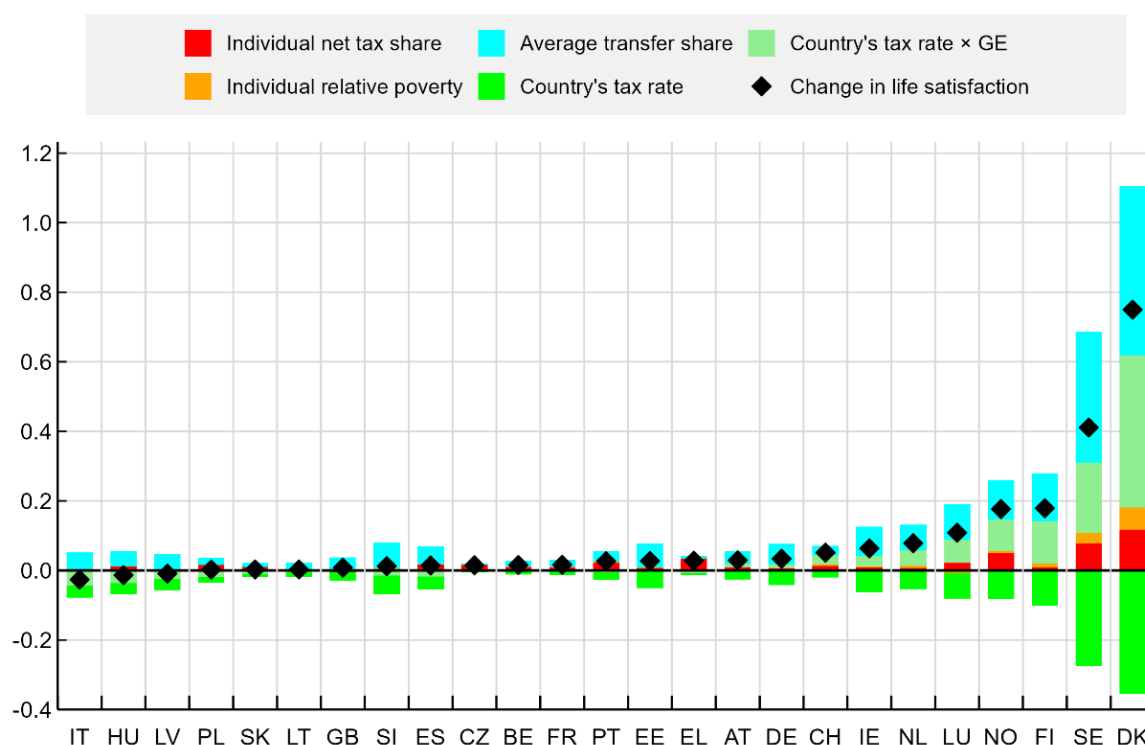
The impact of 10% increase in sickness benefits on life satisfaction



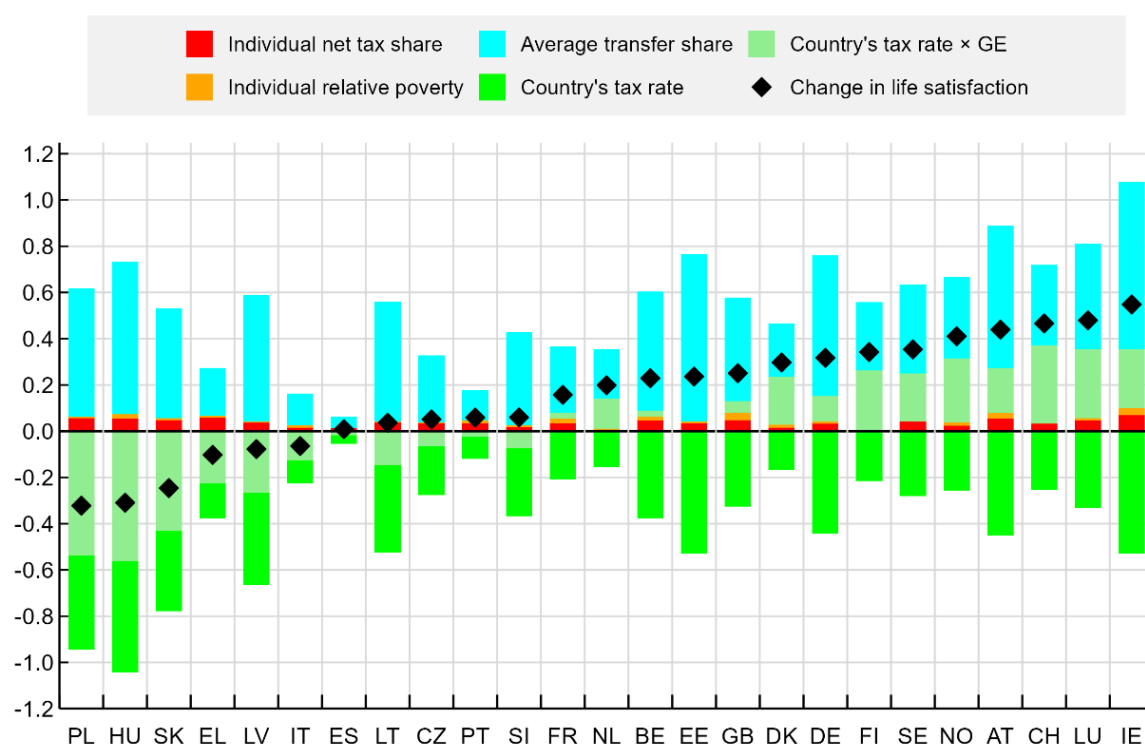
The impact of 10% increase in disability benefits on life satisfaction



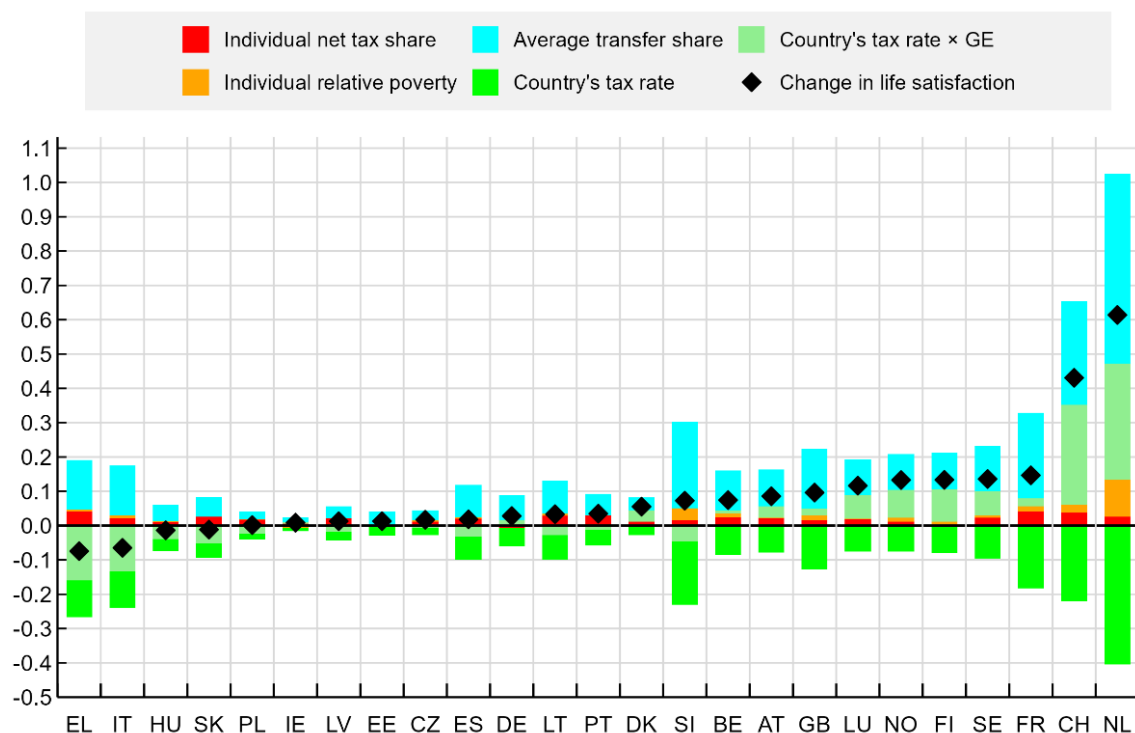
The impact of 10% increase in education-related allowances on life satisfaction



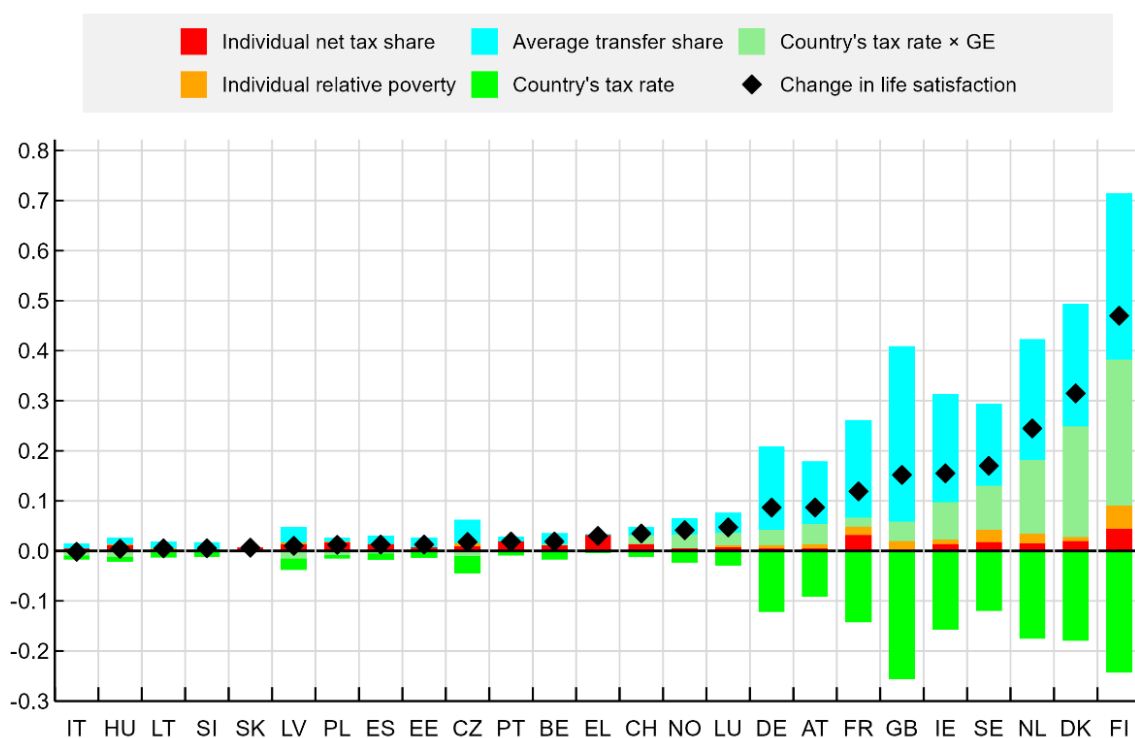
The impact of 10% increase in family/children-related allowances on life satisfaction



The impact of 10% increase in social exclusion allowances (not elsewhere classified) on life satisfaction



The impact of 10% increase in housing allowances on life satisfaction



Note: The contributions of a 10% increase in each selected transfer on life satisfaction are calculated across countries by multiplying each country's average simulated change in the respective variables by the corresponding coefficients reported in column (5) of Table 6. The impacts on life satisfaction are expressed in equivalent changes in disposable income, using the elasticity 1.027 reported on column (3) of Table 2.
Source: OECD calculations.

Notes

¹ For a discussion of Atkinson's measure see Diewert (1985^[33]), Deaton and Muellbauer (1980^[32]) and Blackorby and Donaldson (1978^[37]). Another well-established social welfare specification is Jorgenson and Slesnick (1983^[34]; 2014^[35]). Jorgenson and Schreyer (2017^[36]) compare the Atkinson formula with the Jorgenson-Slesnick formula in a national accounts' context. They also discuss a number of practical issues such as the transition from survey-based to national accounts data or the use of equivalence scales, issues that are not further addressed in the paper at hand.

² Earlier work has tended to only consider income effects to the unemployed and often failed to find any significant impact of unemployment on discounted utility due to the capacity of people to save and cushion income shocks. This study goes beyond this approach by adding a negative externality from the country's unemployment rate.

³ Due to data limitations, individual incomes, net tax shares of disposable income, individual poverty dummies, country-level inequality indices, and average transfer shares of disposable income used in the following regressions are lagged by one year relative to the year in which life satisfaction is measured. See Section 2.3. for details on the data setup.