IS PROGRESSIVITY A SUPPORTER OF TAX REVENUES FOR THE PUBLIC BUDGET OF EU27 COUNTRIES?

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Abstract: *The COVID-19 crisis calls into question the ability of governments to face the challenges, and covering the challenges can only be done with substantial budget revenues. Fiscal progressivity often reflects the discussion about equity, but also fiscal yield. In general, fiscal progressivity reflects the ability of the marginal tax rate to exceed the average rate or the superunitary tax elasticity of a certain type of income in relation to that income. Considering that there is no single answer as to what fiscal progressivity means, the article proposes, through three methods of calculating fiscal progressivity, the analysis of its ability to increase revenues from current taxes on income, wealth, etc. The analysis is based on the study of elasticities and reflects the importance of additional efforts to place as best as possible the elements of fiscal progressivity at the level of fiscal regulations in the countries of the European Union, both for improving fiscal equity for citizens and for increasing the state's self-sustaining capacity.*

Keywords: *personal income tax, progressive taxation system, equity, fiscal yield, European Union countries*

JEL Classification: *H11, H21, H24.*

1. Introduction

Considering the war in the vicinity of the border of Romania, and therefore in the vicinity of the border of the European Union (EU27), considering an accumulation of risks and challenges, from the energy crisis to the ecological crisis, the governments of the European Union must make constant efforts to improve the parameters fiscal budgets and especially for the increase of budget revenues. Revenues from taxes and fees represent a consistent source of revenue for the state budgets of the European Union countries. In this context, it is discussed whether and how fiscal progressivity can be improved. Progressive taxation basically means higher tax rates on income and wealth for those who earn more. In this sense, a good example is personal income taxation, while consumption taxation can be a good example for regressive taxes. An optimal mix of progressive taxes, regressive taxes and single rates can outline the performance of the fiscal system of a country or region of the world.

In this sense, the article tries to analyze not necessarily how progressive the tax systems of the European Union countries are, but especially their influence not only on social equity but also on budgetary performances, and here we have only taken into account the income from current income taxes and wealth. Thus, three methods, some more accurate and some more approximate, of reflecting through elasticity, the influence of fiscal progressivity on current incomes on income and wealth, were proposed.

2. Description of the problem

The COVID-19 crisis, but also the successive crises (energy and food) generated by the war in Ukraine, put into question how income inequalities can be reduced and how the tax burden can be distributed more equitably. The personal income tax, but also other taxes related to income from work and wealth play important roles in ensuring the efficiency of income, but also for a better equity of income distribution. In this sense, fiscal progressivity is not questioned, being practically a social necessity, the countries in the west of the European continent, never going through the experience of a single tax rate, and recently, also other countries in the east of the EU27 such as Slovakia, the Czech Republic, Latvia and Lithuania abandoned the single rate on personal income tax. Therefore, the discussion does not aim at the advantages and disadvantages of fiscal progressivity, but rather the

power of progressivity to satisfactorily regulate the relationship with fiscal-budgetary efficiency.

3. Literature review and the way to highlight the problem

There is no correct and unique answer regarding what progressivity means and the manner of measurement in general, distinguishing between structural and distributional indices. Thus, in the paper of Norregaard (1990), there are discussed different measures of progressivity of personal income tax and the paper describes the different aspects of tax progressivity reflected by the different measures. Also, there are presented estimates of income tax progressivity in most OECD countries.

Using the Gini coefficient, several ways of measuring fiscal progressivity have been developed (e.g. Reynolds and Smolensky, 1977; Kakwani, 1976; Suits, 1977, etc.) but this coefficient has also been subject to criticism in other studies (Atkinson, 1970; Kiefer, 1984). Also, the different ways of measuring progressivity must take into account which income is subject to taxation, as well as the distinction between the individual and the household, the individual being generally the subject of the taxation system, while the household rather targets the system of social transfers (Varela, 2016). That is why, in order to more accurately measure progressivity at the household level, in general, the structure of the household members is taken into account and equivalence points are awarded to them, the equivalent income of the household being thus weighted by the sum of the equivalence points of the household members.

In general, the discussion on fiscal progressiveness is centered on the discussion on the problem of inequality, but the reduction of social and income inequalities is based on the increase of the state's budgetary resources. These are the main source of redistribution for health, education, public safety, defense, public transport, infrastructure, etc. In this sense, although Ivaškaitė-Tamošiūnė and Thiemann ‘s study (2021) highlights the situation of pension taxation, it deals with the problem of fiscal progressivity, and the transition between regimes, from the one with the highest tax exemption (double exemption scenario - EE) to the regime with maximum taxation (double taxation scenario - TT), at the level of the EU countries. The results of this study show that a switch to the EE scenario is associated with a fiscal cost of 0.9% of GDP, whereas the adoption of the TT scenario would lead to a fiscal gain of 1.2% of GDP, abstracting from behavioral reactions. The previous study, together with other analyses, highlights the need for a more thorough analysis of the relationship between progressiveness and fiscal yield.

Redistribution rather aims at the relationship with inequality, while progressiveness brings to the surface the way in which the fiscal burden is distributed. That is why progressiveness can positively influence the collection of tax revenues, but it can just as well be canceled by other effects with the opposite meaning. This says that progressivity itself cannot be a universal panacea for better income equity, it cannot ensure an optimal redistribution, nor does it necessarily mean that it can guarantee additional budgetary tax revenues compared to other taxation systems (based on the proportional share or the regressive one). In this sense, we can interpret progressiveness as a favorable factor for budget revenues, and not necessarily a guarantee for such direction.

4. Methodology and data source

Fiscal progressivity knows various methodologies, it also takes into account the taxes that are analyzed, tax base, etc. But the article does not actually analyze progressivity, but rather seeks to see through three methods if and how progressivity, and especially of direct taxes, is related to income from current taxes on income and wealth. The analyzed period is

2011- 2021, data are Eurostat or DG Taxes and Customs. The first method takes into account the formula of Musgrave and Thin (1948) for measuring progressivity.

There is no perfect measure of fiscal progressivity, but in the work of Norregaard (1990), the method of Musgrave and Thin (1948) is also presented, which show a distributional tax progressivity index (M) that takes into account the evolution of the Gini coefficient before and after taxation. Thus, the M index is calculated as M = (1-Ga) / ((1-Gb) where Ga and respectively Gb are the Gini coefficients after tax income and respectively before tax income. The result regarding the calculation based on Musgrave and Thin's formula is reproduced in table 2.This progressivity index is then analyzed in relation to current income and wealth, through the elasticity study. Thus, elasticities are divided into supra- and sub-unit, positive and negative. In table 1, the initial variables used are described.

Table 1. Variable description and source

Indicators' notation	Indicators Description	Measurement unit	Source
CTIW	Current taxes on income, wealth, etc., Main national accounts tax aggregates	Million euro	Eurostat [GOV_10A_TAXAG__custom_5818064]
Gcoef	Gini coefficient of equivalised disposable income	Coefficient (scale from 0 to 100)	Eurostat, EU-SILC survey [ILC_DI12$DEFAULTVIEW]
Gcoefbst	Gini coefficient of equivalised disposable income before social transfers (pensions included in social transfers)	Coefficient (scale from 0 to 100)	Eurostat [ILC_DI12B$DEFAULTVIEW]
TRsp50	Tax rate, Single person without children earning 50% of the average earning	%	Eurostat, [EARN_NT_TAXRATE$DEFAULTVIEW]
TRsp167	Tax rate, Single person without children earning 167% of the average earning	%	Eurostat [EARN_NT_TAXRATE$DEFAULTVIEW]
Itrlabour	Implicit Tax rate on labour	%	DG taxation and customs union

Source: Eurostat data and DG Taxation and Customs Union; author's systematization

The second method takes into account the progressiveness measured by the gap between the division by categories of persons subject to taxation. In this sense, the category of single persons without children who earn 50% and 167% respectively of the average income was selected. This gap can speak about the equity of taxation at the level of a category of taxable subjects. Thus, this progressivity is also analyzed through elasticities in relation to the same type of income: the income from the current tax on income and wealth. The last method discussed, the third one, could have taken into account progressivity based on the maximum PIT rates (top person income tax rate). The maximum rates of PIT could have suggested a higher fiscal progressivity. Instead of PIT, it has been considered Implicit Tax rate on labor (Itrlabour) to be more appropriate. Thus, the elasticity of income from current taxes on income and wealth was discussed depending on the implicit tax rates on work.

5. Results

According to the form of Musgrave and Thin (1948), the value of the distribution index M greater than 1 indicates a progressive tax. So we can see in table 2 that there is a clear progression at the level of the EU countries for the period 2011-2021.

It has been reproduced this progressiveness in table 3 only regarding the three countries with the most progressive regimes and the three countries with the least progressive regimes. Thus, considering distributional tax progressivity index M, with variations from year to year, the countries such as: Sweden, France, Greece, Portugal,

Germany, Luxembourg are the most progressive countries while Estonia, Cyprus, Latvia, Slovakia, Malta, Bulgaria are the least progressive regimes, at the EU27 level, for the analysis period.

Table 2. Distributional tax progressivity index M for EU27 countries for the period 2011-2021

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
EU	1.425	1.428	1.430	1.435	1.432	1.430	1.416	1.415	1.405	1.406	1.408
EA	1.429	1.427	1.425	1.437	1.432	1.432	1.415	1.416	1.410	1.431	1.488
BE	1.409	1.405	1.401	1.414	1.419	1.437	1.435	1.399	1.392	1.384	1.443
BG	1.294	1.281	1.269	1.313	1.302	1.320	1.335	1.336	1.301	1.288	1.311
CZ	1.343	1.346	1.349	1.362	1.361	1.359	1.341	1.319	1.313	1.314	1.345
DK	1.476	1.491	1.506	1.542	1.503	1.467	1.445	1.416	1.411	1.437	1.437
DE	1.594	1.603	1.612	1.638	1.603	1.584	1.555	1.580	1.576	1.541	1.578
EE	1.276	1.283	1.290	1.312	1.281	1.267	1.260	1.242	1.252	1.257	1.273
IE	1.442	1.478	1.516	1.487	1.435	1.405	1.377	1.357	1.355	1.361	1.403
EL	1.630	1.668	1.708	1.679	1.674	1.672	1.593	1.574	1.537	1.488	1.473
ES	1.312	1.310	1.308	1.330	1.329	1.329	1.310	1.302	1.298	1.279	1.343
FR	1.453	1.425	1.398	1.408	1.422	1.437	1.450	1.456	1.445	1.678	1.716
HR	1.366	1.365	1.363	1.358	1.373	1.363	1.343	1.400	1.380	1.358	1.375
IT	1.317	1.322	1.328	1.328	1.315	1.322	1.302	1.293	1.290	1.288	1.337
CY	1.281	1.256	1.231	1.223	1.325	1.363	1.346	1.353	1.310	1.314	1.307
LV	1.277	1.297	1.317	1.298	1.269	1.250	1.241	1.241	1.239	1.231	1.241
LT	1.347	1.372	1.397	1.349	1.341	1.321	1.300	1.290	1.300	1.288	1.324
LU	1.410	1.394	1.378	1.371	1.378	1.370	1.386	1.449	1.419	1.658	1.473
HU	1.460	1.492	1.526	1.516	1.480	1.474	1.458	1.401	1.382	1.290	1.376
MT	1.277	1.281	1.286	1.293	1.289	1.286	1.273	1.273	1.261	1.242	1.251
NL	1.359	1.359	1.359	1.362	1.360	1.366	1.360	1.360	1.366	1.357	1.346
AT	1.379	1.378	1.377	1.387	1.389	1.381	1.373	1.363	1.384	1.370	1.396
PL	1.329	1.327	1.325	1.328	1.332	1.317	1.343	1.345	1.336	1.331	1.324
PT	1.528	1.487	1.492	1.654	1.638	1.673	1.591	1.561	1.513	1.509	1.519
RO	1.385	1.391	1.397	1.389	1.338	1.398	1.382	1.430	1.361	1.337	1.377
SI	1.344	1.348	1.352	1.346	1.346	1.340	1.341	1.332	1.328	1.326	1.346
SK	1.282	1.287	1.291	1.292	1.280	1.287	1.265	1.260	1.268	1.278	1.269
FI	1.421	1.408	1.394	1.417	1.422	1.446	1.448	1.447	1.439	1.438	1.468
SE	1.685	1.676	1.667	1.732	1.693	1.712	1.698	1.702	1.696	1.661	1.698

Source: Eurostat data; author's calculation. EA - Euro area countries; EU- European Union countries

Table 3. Evidence regarding the first and last 3 countries regarding the M distribution index of fiscal progressivity for EU27 countries for the period 2011-2021

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
MIN (first)	EE	CY	CY	CY	LV	LV	LV	LV	LV	LV	LV
MIN (second)	LV	MT	BG	SK	SK	EE	EE	EE	EE	MT	MT
MIN (third)	MT	BG	MT	MT	EE	MT	SK	SK	MT	EE	SK
MAX (first)	SE	SE	EL	SE	SE	SE	SE	SE	SE	FR	FR
MAX (second)	EL	EL	SE	EL	EL	PT	EL	DE	DE	SE	SE
MAX (Third)	DE	DE	DE	PT	PT	EL	PT	EL	EL	LU	DE

Source: Eurostat data; author's calculations The information from the previous table is used

Table 4 analyzes the result by country regarding the classification of the elasticity of income from current taxes on income and wealth in relation to the M index. Thus, we see that most of the countries can be classified in most of them in positive or negative supra-unitary reactions, so fiscal progressivity definitely has an effect on tax receipts from work and wealth. We observe that the Central and Eastern European countries that are still under tax regimes with flat rates show subunit elasticities, both positive and negative. In this sense, Romania's potential can also be observed that by entering a progressive fiscal

regime, at least through the personal income tax, it can reach the category of countries with a strong influence on fiscal revenues from current taxes on income and wealth.

Table 4. The situation of income elasticity from current taxes on income, wealth according to the distributional tax progressivity index M for EU27 countries

Elasticity type	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Positive superunit elasticities	EU, DK, DE, EE, IE, ES, IT, CY, LV, LT, MT, PL, RO, SK	EU, DK, DE, EE, IE, ES, IT, CY, LV, LT, MT, PL, PT, RO, SK	EU, EA, BE, CZ, DK, DE, EE, EL, ES, FR, HR, CY,MT, NL, AT, PL, SK, FI	BE, DK, EL, FR, LU, AT, PL, FI	EA, BG, IT, NL, AT, SK, FI, SE	BG, FR, LU, PL, Sl, FI	EA, BG, DK, DE, FR, HR, IT, CY, LU,MT, PL	BE, EE, EL, LV, LT, NL, AT, SK, SE	BE, DK, DE, EE, IE, EL, ES, HR, IT, MT, NL, AT, PL, PT, RO, Sl, FI	EU, EA, BE, BG, DK, DE, EE, IE, ES, FR, IT, LV, LT, MT, AT, PT, RO, Sl, FI, SE
Positive subunit elasticities	CZ	CZ	-	HR	BE, FR, RO	EL	HU	-	DK, HU	-
Negative superunit elasticities	EA, BE, BG, EL, FR, HR, LU, NL, AT, PT, Sl, FI, SE	EA, BE, BG, EL, FR, HR, LU, NL, AT, SL, FI, SE	IE, IT, LV, LT, LU, HU, RO, Sl	EU, EA, BG, CZ, DE, EE, IE, ES, IT, LV, LT, HU, MT, NL, PT, RO, Sl, SK, SE	EU, CZ, DE, EE, IE,EL, ES, HR, LV, LT, LU, MT, PL, PT, Sl	EU,EA, BE, CZ, DK, DE, EE, IE, ES, CY, LV, LT, HU, MT, NL, AT, RO, SK, SE	EU, BE, CZ, EE, IE, EL, ES, LV, LT, NL, AT, PT, RO, Sl, SK, FI, SE	EU, EA, BG, CZ, DK, DE, IE, ES, FR, HR, IT, CY, LU, HU, MT, PL, Sl, FI	EU, EA, CZ, CY, SK	EL, CY, LU, HU, NL, PL, SK
Negative subunit elasticities	HU	HU	PT, SE	CY	CY, DK	HR, IT, PT	-	PT	BG, FR, LV, LT, LU, SE	CZ, HR

Source: Eurostat data; author's calculations and systematization

We notice that in table 4 in 2021, an almost ideal situation is encountered in which the increase in progressiveness leads to the recovery of income from current taxes on income and wealth. In general, the inelasticity of collections depending on progressivity should not be condemned because fine adjustments up or down of fiscal elements are normal, from rate changes to changes that affect the tax base. It should also be taken into account that the negative elasticity can be explained rather by the changes in what means progressiveness and less in what means public income, income decreasing only in periods of crisis (e.g. 2020, the year of the outbreak of the Covid-19 crisis, almost at the level of all EU27 countries) or for certain medium or long periods, for countries affected by specific internal crises (e.g. Greece, through the prism of the sovereign debt crisis). Also, the reverse side of an increased fiscal progressivity is the reduction of the incident and the systematic attempt to place the bearers of the fiscal burden on the shoulders of another taxable subject (e.g. the seller over the buyer, the employer over the employee). The economic situation, changes in wages and prices, overlapping crises, etc. all modify the reporting of tax payers in relation to fiscal progressivity. That is why the "virtues" of fiscal progressivity must be viewed with specific caution. The discussion is all the more sensitive as social inequity is put in relation to the fiscal yield desired by the state to increase fiscal progressivity. Large negative supra-unit elasticity can highlight the increased sensitivity of incomes (in our case incomes from work and wealth) to the evolution of progressivity, but not necessarily in the direction desired by governments.

Thus, table 5 reflects the evolution of the same income category, but through the prism of the difference between Tax rates for single person without children earning 167% of the average earning and the one earning 50%, we thus observe that the countries that still have flat tax regimes (e.g. Bulgaria, Hungary and Romania) shows, almost throughout the

analysis period, also inelasticity compared to the income from current taxes on income and wealth.

Table 5. The situation of income elasticity from current taxes on income, wealth in relation with the difference between Tax rates for single person without children earning 167% of the average earning and the one earning 50% for EU27 countries

Elasticity type	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Positive superunit elasticity	DK, EE, IE, FR, HR, LV, MT, AT, PT, RO, SI	DK, EE, IE, FR, HR, LV, MT, AT, PT, RO, SI	BE, DE, ES, AT, PT, SI, FI	DK, SI, FI	EL, MT, AT, SE	DE, IE, CY, LU, HU, NL, AT, FI, SE	EU, EA, BE, EL, HR, IT, CY, LT, SI, FI, SE	DE, HR, CY, HU, NL, AT, PL, FI	CZ, IE, EL, FR, HR, MT, NL, SI	IE, ES, FR, IT, CY, MT, NL, SE
Positive subunit elasticity	CZ, CY, HU	CZ	EU, EA, LV, LT, NL	BE, EL, ES, HR, IT, HU, PT, SK	EU, EA, BE, EE, FR, LV, LT, NL, PT, RO, FI	EL, HR, LV, LT	EE, ES, HU, RO	ES, LU, PT, SE	ES, LV, LT, LU, RO	HR, PL
Negative superunit elasticity	EU, EA, BE, DE, EL, ES, LT, LU, PL, SK, FI, SE	EU, EA, BE, DE, EL, ES, CY, LT, LU, PL, SK, FI, SE	DK, EE, IE, EL, HR, CY, LU, MT, SK	EU, EA, CZ, DE, IE, EE, CY, LT, LU, AT, PL, SE	CZ, DE, IE, ES, HR, IT, LU, SI	EU, EA, BE, CZ, DK, ES, FR, MT, PL, PT, SI	CZ, DK, DE, IE, FR, LU, MT, NL, AT, PL, PT	EU, EA, BE, CZ, DK, IE, EL, IT, LT, MT, SI	EU, EA, BE, DE, EE, IT, CY, HU, PT	EU, EA, BE, DK, DE, EE, EL, LV, LT, LU, AT, SI, SK, FI
Negative subunit elasticity	BG, IT, NL	BG, IT, NL	BG, CZ, FR, IT, HU, PL, RO, SE	BG, FR, LV, MT, NL, RO	BG, DK, CY, HU, PL, SK	BG, EE, IT, RO, SK	BG, LV, SK	BG, EE, FR, LV, RO, SK	BG, DK, AT, PL, SK, FI, SE	BG, CZ, HU, PT, RO

Source: Eurostat data and DG Taxation and Customs Union; author's calculations and systematization

The last approach, the third method (see Table 6), takes into account putting of income from current taxes on income and wealth in the relationship to the evolutions of implicit taxation from work.

Table 6. The situation of income elasticity from current taxes on income, wealth in relation with to the Implicit Tax rate on labor for EU27 countries

Elasticity type	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Positive superunit elasticity	EU, EA, DK, DE, IE, FR, LV, LT, LU, MT, NL, AT, RO, SK, FI	EU, EA, BE, BG, DE, IE, EL, FR, HR, IT, CY, LT, LU, HU, MT, NL, AT, PT, RO, SI, SK, FI	EU, EA, BG, CZ, DE, IE, EL, ES, IT, LT, HU, MT, AT, PL, SI, SK, FI, SE	BE, FR, LT, LU, HU, NL, AT, PL, PT, SI, SK, SE	BG, CZ, DE, EL, ES, LU, HU, MT, NL, AT, PL, PT, SK, FI, SE	EU, EA, BG, CZ, DK, DE, EE, ES, FR, IT, CY, LV, MT, PL, RO, SK, SE	EU, EA, BG, CZ, DK, DE, IE, EL, ES, CY, LV, LT, LU, MT, AT, PL, PT, SI, SK, SE	BE, BG, CZ, DK, DE, EE, IE, HR, IT, LU, HU, PL, PT, SK, SE	EU, EA, DE, EL, FR, HR, HU, NL, AT, SI, SK	EU, EA, DK, DE, EE, IE, EL, ES, CY, LV, LT, HU, MT, AT, PL, PT, RO, SI, SK, FI, SE
Positive subunit elasticity	IT	CZ	FR	-	DK	-	HU, NL	ES, CY	BG, DK, PL, FI	CZ, HR
Negative superunit elasticity	BE, BG, EE, HR, CY, PT, SI, SE	DK, EE, ES, SE	BE, DK, EE, HR, LV, LU, NL, RO	EU, EA, BG, CZ, DK, DE, EE, IE, EL, ES, IT, MT, RO, FI	EU, EA, EE, IE, FR, HR, LV, LT, SI	BE, IE, LT, LU, HU, NL, AT, PT, SI, FI	BE, EE, FR, HR, IT, RO	EU, EA, EL, LT, MT, NL, AT, RO, SI, FI	BE, CZ, EE, IT, LU, MT, PT, RO	BE, BG, FR, IT, LU, NL
Negative subunit elasticity	CZ, EL, ES, HU, PL	LV, PL	CY, PT	HR, CY, LV	BE, IT, CY, RO	EL, HR	FI	FR, LV	IE, ES, CY, LV, LT, SE	-

Source: Eurostat data and DG Taxation and Customs Union; author's calculations and systematization

The implicit taxation from work exits the area of analysis beyond the values of personal income tax rates. According to this analysis, fiscal progressivity influences, positively and above unitary, almost during the entire analysis period, for most countries, the corresponding incomes from labor and wealth taxes. And this method, even more obviously than the first one, supports the possibility of fiscal reform and a moderate transition of our country from a fiscal system based on proportional rates to progressive tax rates.

6. Conclusions

The COVID-19 crisis, but also the multiple crises triggered by the war in Ukraine, brought into question not only the need to protect citizens from dangers, but also the need to ensure budget balances. That's why any means that can contribute to increasing budget receipts must be carefully studied by the governments of the EU27 member states.

Ensuring the most correct and fair taxes is a permanent necessity for the governments of the EU27 states, and fiscal progressivity promises to ensure this. In general, the countries of the former ex-Soviet bloc in the European Union showed increased reluctance to implement or return to a progressive taxation system. But in some situations, the tax returns expected by the authorities through a phenomenon of rolling benefits as a result of a tax haven for entrepreneurs, with reduced tax rates, with a flat, simplified regime, did not materialize. Therefore, perhaps a rethinking of the taxation system in some EU27 member countries would be necessary.

In this sense, the article investigates through elasticities, through three relatively simple methods, if and how fiscal progressivity fits into the fiscal yield scheme for the state. The results indicate the need for finer or more substantial adjustments, depending on the countries, regarding the adjustment of the fiscal regimes in the EU27 countries. However, there is a potential that could be exploited by the countries that still have a flat taxation regime through the gradual transition, at the beginning with a reduced number of thresholds, towards a more progressive and fairer tax system. Among the three methods, the first but also the third indicate quite well the link between the potential of fiscal progressivity on the income from current taxes on taxes and wealth.

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Annexes

1. Presentation of the elasticity of income from current taxes on income and wealth according to the first method for EU27 countries

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
EU	20,9	20,2	7,9	-17,0	-25,3	-5,8	-49,1	-4,8	-35,2	99,9
EA	-22,3	-21,6	2,3	-11,2	3,5	-4,5	40,8	-7,0	-2,9	2,6
BE	-17,4	-16,5	2,4	3,4	0,9	-63,4	-1,8	5,8	6,1	2,3
BG	-8,9	-8,5	2,1	-11,5	6,9	11,5	55,7	-3,7	-0,3	14,2
CZ	0,0	0,0	1,1	-136,3	-73,6	-8,1	-8,1	-13,3	-48,2	-0,2
DK	5,5	5,2	5,4	2,1	-0,2	-3,2	1,2	-34,1	0,6	645,4
DE	7,8	7,4	2,3	-2,4	-5,8	-3,3	3,4	-11,3	2,8	5,5
EE	31,7	26,8	5,4	-3,7	-1,2	-8,2	-8,9	6,7	8,3	18,9
IE	1,2	1,1	-4,4	-3,4	-1,9	-2,9	-8,2	-60,5	5,4	7,2
EL	-3,3	-3,5	4,7	11,9	-39,2	0,1	-4,1	1,8	4,7	-10,7
ES	4,6	4,7	1,2	-51,5	-53,9	-4,5	-14,5	-5,1	1,9	2,9
FR	-2,7	-2,6	1,0	1,6	0,6	5,6	14,8	-2,3	-0,3	2,7
HR	-44,1	-41,4	16,9	0,2	-15,7	-0,9	2,0	-5,3	5,5	-0,4
IT	1,3	1,2	-690,1	-2,3	3,9	-0,7	1,0	-14,6	22,3	1,8
CY	1,3	1,3	5,1	-0,3	-0,1	-7,8	13,0	-1,5	-7,4	-36,2
LV	2,9	2,7	-2,7	-1,9	-6,3	-12,7	-264,9	6,9	-0,1	15,8
LT	4,7	4,3	-1,7	-19,7	-5,2	-2,8	-16,7	93,4	-0,2	9,4
LU	-4,9	-4,7	-5,8	20,4	-12,8	5,7	4,0	-1,8	-0,2	-1,1
HU	-0,4	-0,4	-10,3	-3,4	-23,4	-7,4	0,3	-5,3	0,6	-1,0
MT	38,7	34,3	18,0	-18,9	-74,6	-12,9	397,0	-11,1	5,3	29,8
NL	-213,0	-215,0	47,1	-79,2	10,4	-31,9	-86,5	24,0	3,0	-11,5
AT	-71,8	-68,8	7,4	40,5	10,7	-8,3	-11,5	2,8	9,5	7,7
PL	14,2	14,3	21,9	23,8	-1,7	6,4	171,7	-14,4	3,5	-28,4
PT	-15,0	90,4	-0,2	-2,6	-1,1	-0,7	-3,5	-0,3	12,6	4,4
RO	24,5	22,0	-15,5	-3,7	0,8	-3,5	-3,5	-1,7	2,6	6,6
SI	-19,7	-20,8	-13,8	-78,3	-19,6	162,9	-18,7	-14,9	13,8	12,9
SK	35,9	31,4	211,7	-12,5	4,4	-2,8	-14,8	7,0	-2,5	-23,9
FI	-6,2	-6,0	1,6	8,8	1,4	33,8	-14,6	-4,4	61,2	5,1
SE	-9,3	-9,0	-0,1	-3,0	5,0	-4,5	-18,6	4,0	-0,5	6,1

Source: Eurostat data; author's calculations