

A European universal basic income

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1 Introduction

Proposals of a Universal Basic Income (UBI) have proliferated enormously during the first decades of the 21st century, especially with the outbreak of the Covid-19 pandemic at the beginning of 2020. One of the reasons is the balance of the various allocations and subsidies currently supported by governments to deal with poverty, including guaranteed income, minimum income allowance, the living wage, etc., i.e. conditional incomes with very limited results. These conditional benefits, seen in different European countries and around the world, suffer from a long-acknowledged series of problems that are intrinsic to conditionality, however generous. However, these very mistakes are persistently repeated. The Spanish government's Ingreso Mínimo Vital or Minimum Living Wage (MLW) implemented in the mid-2020s is an outstanding case in point. At the beginning of 2023, many of those who said that the MLW was a qualitative breakthrough for the Welfare State and similar nonsense, now propose the reformation of this MLW. Reforming the reformed reformation would be a disaster. The Renda Garantida de Ciutadania or Citizen's Guaranteed Income set in operation in Catalonia a few years earlier is another example. This is due to the intrinsic problems of the concept of conditional benefits, as mentioned repeatedly in academic publications. These problems are as follows:

The poverty trap

This is a very serious issue. When receiving a conditional benefit, there is a strong disincentive to search for and to do paid work, since it implies the total or partial loss of the benefit. In stark contrast, a UBI functions as a base or floor, not as a ceiling: doing paid work does not involve the loss of the UBI and thus the disincentive vanishes or is not as great.

¹ BOLLAIN; RAVENTOS, La renta básica incondicional ante las limitaciones de las rentas mínimas.

Administrative costs

Conditional benefits have very high administration costs. This is a long recognised issue. If it is necessary to select whether someone "deserves" a conditional benefit, it is necessary to check that they really meet the condition as required. This generates immense costs in several ways, one of which is particularly interesting: costs become proportionally much greater for the few who receive the benefits. Conditionality implies control, control

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implies management and administration costs. The reason is well known: it is about controlling whether the person receiving the conditional benefit fulfils the legal requirements, and furthermore, once the applicant has managed to get through all the bureaucratic means tests and receives the conditional benefit, they continue being monitored to make sure they still fulfil the conditions that make

them eligible. They are supervised when applying for the subsidy, and they are subsequently supervised while receiving it. The UBI would not have costs deriving from conditionality since it is unconditional and there would be no need for an army of inspectors to identify who should and who should not receive the conditional benefit. The whole population would receive it, unconditionally.

Stigmatization

Another problem is the stigmatization associated with conditional benefits. That is to say, the situation the applicants face when having to describe themselves to the administration as "poor" or "sick," not to mention directly "guilty of being failures" or "extremely poor." Conditional benefits often entail intrusive questions, even about the most intimate personal relationships of the applicants, which may be supplemented by home checks by visiting inspectors. Sometimes the bureaucratic administration seems to treat people applying for conditional benefits as if they were potential criminals wanting to cheat at the slightest opportunity. This treatment is undoubtedly stigmatizing. The UBI does not stigmatize for a very obvious reason: it is received by the entire population of the geographical area where it is implemented. Social groups or specific people are stigmatized. The entire population cannot be stigmatized. There is nothing stigmatizing about receiving a UBI that is granted to all members of society.

Insufficient coverage

The insufficient coverage of conditional benefit programmes, however different they may be from one another, is another of the problems presented by this kind of public policy. In general, these programmes cover a very small proportion of the population that needs to benefit from them. The reason is that a small amount of resources is budgeted given the cohort of those who might be potential beneficiaries. In effect, these programmes do not reach the entire population that might benefit from them.

Non-take-up

The Non-Take-Up rate (NTU) of means-tested benefit claims is the proportion of those who do not apply for benefits despite meeting all the requirements for eligibility and thus have the right to claim. These show considerable percentages, in some cases of up to 60%. There are several reasons: personal, design of the benefit, management, etc. But the fact that such a high percentage of potential beneficiaries do not request the conditional benefit is a serious problem. With a UBI it goes without saying that the NTU phenomenon vanishes.

The question of a UBI re-emerged during the Covid-19 pandemic, along with the situation created by the economic crisis of 2008 from which society had not yet recovered when the health crisis hit. It resurfaced so strikingly that it surprised many specialists and defenders of conditional benefits – who never tired of saying UBI was an undesirable measure, or in any case

A public, monetary, individual, unconditional and universal allocation. not worth considering until the next century or well into this one – saw it defended with varying degrees of "orthodoxy" by media and personalities such as the Financial Times, UN Secretary General António Guterres (1949), or Pope Francis (1936), the head of the Vatican State and of the Catholic Church, among others. And all this in an interval of not many months.

Precisely because of this explosion of new supporters and defenders, UBI has not been free of confusion for a reason that is impossible to muffle: it has been talked and written about by many people who until recently had no idea of the technical and regulatory terms of UBI. Indeed, they knew little more than a few words. To avoid the slightest ambiguity, what we mean by UBI, and this will be the definition we will use throughout this work, is as follows: a public, monetary, individual, unconditional and universal allocation. In other words, an amount of money granted to the entire population

absolutely unconditionally within a given geographical area. In the case of this research, the geographical area is the EU, excluding Lithuania for methodological reasons that we will explain later.

Some confusion has also come about in some cases by the fact that UBI has been defended from very different and contrasting political perspectives: from the neo-liberal right to the left – and also within the space of the left itself, from different and quite distant positions. In this research, the authors defend UBI from a left-wing perspective. What exactly does this mean? The UBI proposals arising from the right and the left differ in several features, but the most important can be grouped in the following way: how it is financed, the economic policy measures that are additionally proposed alongside UBI, and the way the neutrality of the state is understood.²

The fundamental part of this research means to answer the following question: can UBI be financed by the EU? And more specifically, to answer the key question of how it can be financed, through three taxes: income tax, wealth tax and carbon tax.

Why these three taxes? The proposal³ is based on simplification since each fulfils a double function: firstly, all three are reliable, recurring sources of finance, with significant potential collection, and are difficult to elude or relocate – as most of the wealth in each country is made up of real estate assets in the country itself, or in shares of companies located in the territory. And secondly, they are progressive taxes that can be improved. Thus, income tax tends to have regressive deductions or lesser tax rates on capital than on labour; wealth tax makes it possible to recover gains in wealth that escape income tax, and so far its low rates favour the concentration of capital in the hands of the wealthiest 10% of the population, and very particularly the 1% or 2% at the top of the pyramid.⁴ As is widely acknowledged, wealth is distributed much less equally than income. Or it is highly concentrated in fewer hands, which would be another way of putting it. And with regard to environmental taxes, these are Pigouvian, which seek to correct the negative externalities of the generation of emissions of polluting factors in the natural environment, be they greenhouse gases, radioactive waste or other materials. Obviously, this is in regard to taxing territorial emissions – although emissions implicit in imported goods might also be taxed. The quotas for individual carbon dioxide emissions are in this line, as is the proposal that the collection be distributed equitably among the population – as a basic income – or focusing on the lower income segments. These measures are linked with

² RAVENTOS, La renta Básica, ¿por qué y para qué? These and other differences are discussed in this book.

³ Of which this study is an initial approach that may be extended, polished and substantiated in the future.

⁴ BLAKELEY, El mundo es de los multimillonarios. Data and references are given in this publication.

the Agenda on Climate Change and the Sustainable Development Goals, and which show that the greater efforts needed to accelerate the ecological transition and reduce emissions are not in discussion.

In particular, talking about taxes means talking about property. Property rights and structure as we know them in Europe is only one possible way to regulate and distribute property. It is not particularly fair, in fact, but this is not where we want to focus our attention, but rather that it is materially possible to establish them in other ways, as in the same level of economic development. Whether it is done in one way or another is a political decision, not a technical one, despite the fact that, as often happens, political decisions are technically justified. Technique tells us how and what can and cannot be done, while policy is what we decide might be done. If decisions are democratic, policy tells us what the majority wants done, and therefore markets are political and so are taxes. For example: private property has been concentrated in very few hands at certain times in history, while in others it has been less concentrated. And without leaving the very same countryto make the most obvious comparisons yet If we look at: the top decile in both the EU and the US, this decile currently accumulates more than 55% and 70% in each economy respectively in terms of real estate and financial assets, and the top percentile in each owns more than 20% and 40% respectively.⁵ This is not a technical issue but a political one. Property is not just an economic relationship, it is a relationship of power. And power, whoever wields it and uses it for their particular interests, through lobbies, influence peddling and other forms of pressure, is pure politics.

One aspect that interests us in particular in this research is levels of taxation – how taxes are redistributed among the different parts of the population, and whether those who evade them are pursued or not – which is the product of politics, not of technique. The technical aspects of tax can be and are becoming increasingly sophisticated, but it does not tell us whether the very rich should pay 90% of their income or 1%, or whether they should pay tax on their wealth or not. This is decided by the policy. And now it clearly leans towards the second.

The concepts of income and wealth must be clearly differentiated. Wealth is much less equally distributed than income. Wealth is subject to taxes on assets and property – real estate, movable, financial and many other forms, except the primary residence, although this pays Real Property Tax (IBI). This means several things. One may defend a high tax on income and a tax on wealth that goes by different names, such as a "great fortunesgreat-fortune

⁵ PIKETTY, A Brief History of Equality. Originally in French: Une brève histoire de l'égalité.

tax," for example. But they are conceptually different. Additionally, it may be argued on democratic republican grounds that large concentrations of property should be limited. Vast concentrations of wealth and high incomes are related since wealth obviously helps to increase income, and income helps to increase wealth.

People are not as aware as they might be of the fact that at other times, throughout the period from the 1940s to the 1970s, the top marginal income tax rate in the US averaged 78%, and 91% from 1951 to 1963. It should be

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added that large inheritances were taxed at 80% from 1941 to 1976. As we have explained on other occasions, President Franklin Delano Roosevelt (1882-1945) dared in 1942 to defend a marginal tax rate of 100% for those with incomes above \$25,000 a year, which would be around \$400,000 today. This proposal was unsuccessful, but soon after, a rate of

94% was established on fortunes above \$200,000 at the time. Furthermore, that only deals with income, without going into the question of concentration of wealth, which as we have said is currently much less equally distributed in the EU.

The figures offered in this research are not the only ones that might arise, as will be clear. From those that "could arise," we have chosen the four models or scenarios that specify a situation that we consider fair, or at the very least come close to a practical formulation of what we consider fair. The finance for the UBI would also be possible by setting other tax rates and charging those who are not wealthier more. Or charging the wealthiest much more. There are four models or scenarios that we will specify later in this study, and as stated, more could be done. If we are to express any particular preference, it would be that described in Scenario One. It seems simple and easy to explain to anyone interested in the UBI proposal. That is, Scenario One, an unconditional UBI for the entire EU population would be financed through an income tax reform and the introduction of a wealth tax and a carbon tax. The amounts to be received as UBI in this scenario would vary depending on each personal situation; so, for example, every person in the EU who lived alone would receive 10,286 euros a year - the at-risk-of-poverty threshold in the EU – that is, 857 euros a month; while in the case of a household with two adults and two minors, the two adults would receive 900 per month each. The other scenarios we propose in this study can also be defended with solid arguments, but we believe that Scenario One provides better conditions.

In the following pages we will offer many figures on how UBI can be financed in the EU, but we will now devote some space to the justice of the proposal. If we make certain choices of proposals to be analysed below, it is because we consider them fairer than others, but this must be justified. And that is what we intend to do next.

Wheter a proposal is considered fair or not will depend on what we consider is, or is not, a fair society.

Whether a proposal is considered fair or not will depend on what we consider is, or is not, a fair society. Academic theories of justice are dedicated precisely to establishing principles and criteria for deciding whether a society is more or less just. Or, if you wish to put it another way, they establish the "ideal model" and contrast it with reality in order to establish what deviates more or less from this

model. Given that the most powerful objection that might be made of UBI is not that it is materially impossible to finance, but that it is unfair, it would be very reasonable to wonder about the justice of the proposal. A social measure that is politically or economically viable would be of little use if it was not fair as well. Let us imagine that our model is impeccable from a technical point of view, but if the UBI has not been shown to be a fair measure, there is little point in looking into its financial possibilities. Or to give an example used on another occasion: 6 let us imagine a proposal by which only those who could prove ten years of compliance with all the mandatory rites the Catholic Church establishes for their congregations could receive unemployment benefit. As this is easily proven, making this proposal technically feasible would not be difficult at all, but many, perhaps the immense majority, would consider it an unfair measure. Still more interesting if we contrast the true economic and social reality experienced in 2023. There is no doubt that it is politically and economically possible, because that is what it is, they are facts. But just because they are, does not mean that this reality is fair, at least according to the criteria that we will now set out.

There are many theories of justice. The most widespread are those classed as liberal. Within these, there are many that might be located anywhere from the extreme libertarian right to the egalitarian left. But we mean to present our justification of the justice of UBI in a republican manner, and more specifically according to how republicanism has historically understood freedom, as opposed to how liberalism understands it. Because of its great tradition of over 2,000 years, the Republican ideal has been expressed in quite different ways. But there is a key characteristic element in understanding this way of

⁶ CASASSAS, MARTINEZ-CAVA; RAVENTOS, Socialismo y renta básica. Razones republicanas de la propuesta.

understanding freedom that clearly differentiates it from liberalism: freedom is firmly bound to the material conditions of existence, and consequently cannot be approached separately. That is precisely what liberalism did at its origin just over two centuries ago, detaching freedom from the material conditions in which people live in society. The Napoleonic codes represent an unparalleled instance and a primary legislative reproduction of this liberal principle: freedom is independent of the material conditions of existence. Following the republican tradition, society – any society – is replete with threats to freedom. There is a great manner of threats, but there is one that is particularly important in shaping our societies as we go forward: property. And if property is so important to the republican conception of freedom and of its threat, we must devote some attention to it.

As we have already stated on other occasions⁸ that the conception of property that has historically been held is substantially different from that which has been imposed institutionally in a large part of the world from the 18th century to the present day. The conception of property that has triumphed as the capitalist method of production conquered Europe is that which was clearly defined by the jurist William Blackstone (1723-1780) as: "that sole and despotic dominion which one man claims and exercises over the external things of the world, in total exclusion of the right of any other individual."9 On the other hand, for republicanism, property is historically understood as control over resources, which bestows political independence and legal personality, both conditions for freedom. And it is not a right that certain individuals naturally have over others but a socially recognized right that is bestowed upon persons and entities, that is to say, it must be regulated by public law. Property has historically had many variants and forms: common with private use, private with common use, common with common use, and private with private use. The private with private use is that which has become the dominant form from the 18th century to the present day in most countries, if we leave aside experiments in collective and bureaucratically centralized ownership that we have known in certain countries throughout the 20th and 21st centuries

In short, property is shaped historically, based on struggle, compromise, and temporary truces between different groups and social classes. We subscribe to the manner in which French economist Thomas Piketty (1971)¹⁰ puts it: "Property is a notion situated in its historical context: it depends on how each

⁷ A masterful historical reconstruction of republican freedom in opposition to liberal freedom in DOMENECH, El eclipse de la fraternidad.

^a For example ARCARONS; RAVENTOS; TORRENS, El esclavismo a tiempo parcial y la dignidad. RAVENTOS, La llibertat i la igualtat republicanes. Sobre dominacions, mercats i propietat.

⁹ BLACKSTONE, Commentaries of the Laws of England.

¹⁰ PIKETTY, A Brief History of Equality.

society defines the forms of legitimate possessions – land, houses, factories, machines, seas, mountains, monuments, financial assets, knowledge, slaves, etc. – as well as the legal and practical procedures structuring and framing relations of property and power between the social groups concerned." And the corollary is quick to reach: institutions must always be forced to change in order to produce benefits for the population that is not wealthy. Again, as the French author says: "If in the last two centuries, there has been a historical trend in the world towards greater social, economic and political equity, it has been thanks to a series of revolts, revolutions and large-scale political mobilizations. The same will happen in the future."

The proposed tax models and rates that will appear in the following pages of this paper are instruments, and as instruments they are neutral. The database used is in the public domain, and other authors can use them instrumentally to make very different models and proposals. And of course, the conceptions of freedom other authors may have can be very different from ours. We have already explained ours.

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This research does not go into aspects that are indisputably important, as is the relationship between the different administrations, for example. This is significant since when discussing the EU there are many administrations and the relationship between them is important. Likewise, we do not go into the forms of governments and whether they are reluctant or inclined

to implement UBI. More generally, what has come to be called "governance" since the 1990s is not discussed in this paper either, as it is very far removed from the type of research we offer. Which governments or administrations should collect the taxes we propose to finance a European UBI, and which should make it reach the citizens of the different Member States is a subject we will not go into, but although it is undoubtedly complex, this does not seem to us to be an argument against the idea of a European UBI: from the Euro to the Next Generation EU funds, these have already shown that "Europeanizing" the governance of the Union's economic and social policies is possible.

2 Methodology

The database used has been provided by EUROSTAT¹¹ and basically contains the 2020 cross-sectional data of the European Union Statistics on Income and Living Conditions (EU-SILC). This information is harmonized by the 27 states that currently make up the EU – in the case of Spain it is known as the *Encuesta de Condiciones de Vida* or Living Conditions Survey. The information is divided into four sections, of which we will quote the most significant elements as follows:¹²

1. Characteristics of the home:

Identifier of the responding household, country, region (NUTS2), elevation factor.

2. Personal characteristics of the household members:

Identifier of the person, age, gender, marital status, basic activity, position within the household, level of education, personal elevation factor.

3. Household details:

- Aggregate income of the household: gross and disposable income of the household, income from property rentals, interest, dividends and capital

¹¹ Along with research project RPP 144/2022-EU-SILC.

¹² In EUROPEAN COMMISSION documents, Income and Living Conditions; Quality of Life; SILC Disclosure control Rules. Year 2020 cross-sectional data. Differences between the original database – as described in the guidelines – and the anonymised user database and Methodological guidelines and description of EU-SILC target variables. 2020 operation – April 2020 version – show a comprehensive description of the set of variables contained in the microdatabase used.

gains, household and child benefits, social assistance benefits, housing benefits, transfers received from other households, income of children under sixteen, wealth tax, transfers paid to other households, income tax and social security contributions.

- Characteristics of the home: tenure, space, rental or mortgage costs.
- Characteristics of social exclusion and material deprivation.

4. Details of members over the age of sixteen:

- Earned income: work cash and in kind unemployment benefit, selfemployment, pensions.
- Personal characteristics: age, gender, kinship, marital status, position within the household, country of birth.
- Levels of education (ISCED), continuous training activity.
- Health.
- Work situation: situation at work, occupation (ISCO-08), activity (NACE), hours worked.

With this information in the form of microdata, it is possible to carry out a detailed analysis of the distribution of income and the situation of inequality, poverty and social exclusion in which European households find themselves, drilling down in the states that make up the EU. This is an essential first step for the construction of a financial model for a European-wide UBI, given

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that it determines one of the most important objectives that the UBI has to deal with: the elimination of poverty.

We will thus give some figures that will allow us to evaluate the initial situation, which from now on we will call the "ex-ante" situation – distinguishing it from "ex-post" – when the UBI is implemented.

Table 1 shows the representation in the sample and in the population of the median equivalent income¹³ and the threshold of risk of poverty and severe poverty for each of the 26 EU states

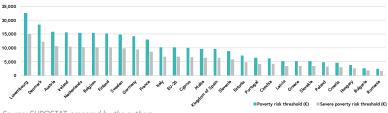
¹³ Lithuania has been excluded because although the most important aggregates can be obtained in its EUSILC data, there are major data gaps in a considerable number of significant variables. In addition, it should be noted that for Germany and Italy, the database used is for 2019, given that at the time of the request they had not yet provided EUROSTAT with the values for 2020. It should also be noted that income values correspond to the year prior to the survey. Thus the values of the 2020 surveys correspond to 2019 and those of the 2019 surveys correspond to 2018.

in this study.¹⁴ All these values have also been calculated for the EU as a whole in order to provide a reference, given the considerable variation

The at-risk-ofpoverty threshold is a crucial value in the UBI financing model that we will develop, as will be justified later on. between the different states. The at-risk-of-poverty threshold is defined as 60% of the median equivalent income – 40% in the case of severe poverty – i.e. household net income divided among the consumption units. These consumption units are linked to an equivalence scale – whose objective is to provide a response to the idea that the fixed costs of the household do not increase to the same degree as its size. The

equivalence scale used in the EU-SILC methodology is that of the modified OECD method, which assigns 1 to the first person in the household aged fourteen or over, 0.5 to other persons of fourteen years and over, and 0.3 to those under fourteen 15 The at-risk-of-poverty threshold is a crucial value in the UBI financing model that we will develop, as will be justified later on. Chart 1 shows the different thresholds for the risk of poverty and severe poverty in each state.

Chart 1: Poverty risk treshold



Source: EUROSTAT, prepared by the authors

^M The median is the middle number in a sorted list of numbers, the point above and below which of the observed data falls.

¹⁵ Two simple examples make it easy to understand the relationship between the equivalence scale and theequivalent household income: a) In a household made up of two adults and two children under the age of fourteen that have an equivalence scale of 2.1 and a net income of 45,000 euros per year, the equivalent income of each of the four persons in the household would be €21,429 per annum (45,000/2.1 = 21,429). b) In a single-person household with a net income of 25,000 euros per year, given that its equivalence scale is 1, its equivalent net income would be €25,000 per annum.

Table 1: Population and poverty risk threshold

			Median Equivalent	Poverty risk	Severe poverty risk
Member State	Sample	Population	Net Income	threshold	threshold
Germany ¹	23.925	80.988.833	23.638,67	14.183,20	9.455,47
Austria	12.274	8.757.572	26.555,43	15.933,26	10.622,17
Belgium	16.105	11.363.821	25.671,98	15.403,19	10.268,79
Bulgaria	16.625	6.962.424	4.611,92	2.767,15	1.844,77
Croatia	18.865	3.935.638	7.891,71	4.735,03	3.156,69
Denmark	13.521	5.774.377	30.680,90	18.408,54	12.272,36
Slovakia	13.800	5.389.916	8.703,03	5.221,82	3.481,21
Slovenia	24.794	2.055.303	14.766,67	8.860,00	5.906,67
Spain	38.011	46.874.430	16.043,38	9.626,03	6.417,35
Estonia	15.143	1.315.941	12.228,03	7.336,82	4.891,21
Finland	22.701	5.441.980	25.490,00	15.294,00	10.196,00
France	24.758	63.976.918	21.730,00	13.038,00	8.692,00
Greece	32.962	10.514.769	8.780,95	5.268,57	3.512,38
Hungary	14.363	9.578.774	6.478,28	3.886,97	2.591,31
Ireland	10.683	4.973.690	26.250,00	15.750,00	10.500,00
Italy ¹	43.400	60.127.687	17.165,38	10.299,23	6.866,15
Luxembourg	7.461	598.541	37.844,04	22.706,42	15.137,61
Latvia	13.215	1.884.981	8.826,92	5.296,15	3.530,77
Malta	9.555	505.014	16.240,35	9.744,21	6.496,14
Netherlands	28.573	17.148.722	25.800,56	15.480,33	10.320,22
Poland	38.835	37.067.779	8.021,85	4.813,11	3.208,74
Portugal	27.698	10.295.909	10.800,00	6.480,00	4.320,00
Romania	16.966	19.348.575	4.267,38	2.560,43	1.706,95
Sweden	14.102	10.327.589	24.700,37	14.820,22	9.880,15
Czechia	18.758	10.458.507	10.627,19	6.376,31	4.250,88
Cyprus	10.952	884.233	16.704,00	10.022,40	6.681,60
EU-26 ²	528.045	436.551.925	17.144,00	10.286,40	6.857,60

Source: EUROSTAT, prepared by the authors. Figures for 2020 in euros.

Table 2 shows the sample by age and gender of the states in the study, and also the concepts of poverty and social exclusion – the last eight rows – relating directly to the at-risk-of-poverty thresholds introduced above, which can be calculated from the microdata available. We will refer to this in detail later on.

¹ Figures for 2019 ² Except Lithuania for lack of data

¹⁶ It should be noted that for Germany and Malta there are some values N/A – lacking data. In the case of Germany, the data is not provided for the over-80s, who are included with the over-75s. In the case of Malta, unlike the other states, age is provided in the form of intervals, which prevents determination of certain cells.

Table 2: Population, poverty and exclusion

Cohort	EU-26	Germany	Austria	Belgium	Bulgaria	Croatia	Denmark	Slovakia	Slovenia	Spain	Estonia	Finland	France	Greece
Persons in sample	528.045	23.925	12.274	16.105	16.625	18.865	13.521	13.800	24.794	38.011	15.143	22.701	24.758	32.962
Households in sample	228.181	12.350	6.021	7.088	7.313	7.716	6.562	5.542	8.539	15.043	6.434	9.474	10.899	15.086
Persons represented	436.558.564	80.988.833	8.757.572	11.363.821	6.962.424	3.935.638	5.774.377	5.389.916	2.055.303	46.874.430	1.315.941	5.441,980	63.976.918	10.514.769
Households represented	190.711.098	40.780.161	3.990.132	4.993.966	2.931.327	1.435.193	2.920.885	1.852.059	834.520	18.773.903	626.028	2.787.200	28.421.366	4.115.678
Equivalent consumption units	301.257.562	58.780.712	6.135.123	7.792.940	4.759.528	2.580.009	4.167.950	3.460.739	1.381.747	31.548.106	930.222	3.954.332	44.138.768	7.041.174
Under 3 years	10.558.665	2.338.721	217.896	320.231	133.464	83.390	173.237	164.716	55.160	1.005.120	41.154	137.162	1.915.754	163.868
3 to 13 years	48.905.398	7.869.024	931.682	1.526.946	771.585	430.711	710.378	634.505	254.310	4.956.218	158.575	653.397	8.197.781	1.129.144
0 to 13 years	59.464.063	10.207.746	1.149.579	1.847.177	905.049	514.101	883.615	799.221	309.470	5.961.337	199.729	790.559	10.113.535	1.293.012
14 to 15 years	8.913.154	1.436.168	185.867	266.525	138.288	78.986	115.556	102.446	36.476	927.512	27.391	120.153	1.543.931	222.607
14 to 17 years	18.136.699	2.913.825	387.137	505.323	276.692	155.437	235.353	192.093	74.126	1.860.241	52.558	246.833	3.362.544	445.510
0 to 16 years	72.966.430	12.303.598	1.429.781	2.232.342	1.121.353	930.675	1.056.788	948.300	363.955	7.395.112	239.195	971.725	12.610.311	1.620.686
16 and over	368.181.346	69.344.919	7.422.126	9.250.119	5.919.086	3.342.551	4.775.205	4.488.249	1,709.357	39.985.581	1.088.821	4.531.268	52.319.452	8.999.150
16 to 17 years	9.223.544	1.477.657	201.270	238.798	138.403	76.450	119.797	89.647	37.650	932.729	25.167	126.680	1.818.613	222.903
Under 18 years	77.600.761	13.121.571	1.536.716	2.352.500	1.181.741	669.538	1.118.969	991.314	383.597	7.821.578	252.288	1.037.392	13.476.079	1.738.522
18 and over	358.957.802	67.867.262	7.220.856	9.011.321	5.780.683	3.266.100	4.655.408	4.398.602	1.671.706	39.052.852	1.063.653	4.404.588	50.500.839	8.776.247
18 to 25 years	36.519.048	6.846.077	724.374	969.696	484.522	354.175	599.562	405.703	158.324	3.820.665	98.912	485.562	5.628.321	805.032
26 to 40 years	82.185.446	15.570.021	1.812.435	2.245.672	1.360.143	761.840	1.059.499	1.205.945	410.948	8.459.349	281.060	1.040.491	11.270.580	1.849.372
41 to 50 years	62.170.354	10.535.217	1.168.814	1.451.322	1.058.222	532.803	744.025	817.607	297.962	7.969.150	181.125	643.023	7.979.555	1.587.907
51 to 55 years	32.457.618	6.815.857	711.078	836.991	471.980	282.148	424.883	372.937	147.898	3.663.697	83.952	364.600	4.262.513	809.879
56 to 60 years	30.154.131	6.138.449	687.055	765.076	474.172	284.601	384.142	356.297	157.032	3.354.058	86.799	366.599	4.143.280	783.032
61 to 65 years	29.523.276	5.999.685	640.366	733.908	484.790	281.677	333.587	347.206	135.352	2.896.894	899.98	351.296	4.365.627	652.704
66 to 75 years	54.695.959	15.961.957	816.716	1.117.478	862.177	431.815	665.045	597.654	220.600	4.642.660	128.977	676.341	7.107.812	1.221.900
76 to 80 years	10.876.835	no data	272.063	310.696	234.121	123.277	201.088	141.407	58.311	1.504.507	39.291	168.083	1.867.442	317.306
Over 80 years	20.375.135	no data	387.955	580.543	350.557	213.764	243.578	153.847	85.280	2.741.872	76.871	308.593	3.875.709	749.115
Men	213.491.950	39.946.345	4.314.729	5.619.246	3.375.364	1.914.040	2.871.580	2.632.098	1.033.816	23.003.544	622.903	2.680.087	31.038.123	5.130.780
Women	223.066.613	41.042.488	4,442.843	5.744.574	3.587.060	2.021.598	2.902.797	2.757.818	1.021.487	23.870.886	693.038	2.761.893	32.938.796	5.383.989
Households at risk of poverty	34.970.421	8.023.838	622.851	800.211	824.191	339.790	469.423	218.888	148.996	3.852.987	181.904	447.278	4.113.429	701.405
Households at risk of severe poverty	12.825.147	2.802.999	201.200	165.554	296.875	142.538	150.843	68.949	30.683	1.727.335	54.184	74.861	1.420.155	276.011
Hous eholds in severe material deprivation (EU-2020)	11.100.804	1.482.827	107.019	232.225	665.937	132.761	93.893	121.348	35.084	1.223.632	21.469	93.756	1.419.681	680.171
Persons under- or unemployed (EU-2020)	25.883.219	4.407.795	464.711	1.020.512	423.938	243.918	377.046	175.789	73.622	3.464.740	45.149	376.007	4.041.309	940.034
Persons at risk of poverty	71.672.911	12.184.646	1.221.539	1.602.223	1.660.197	720.091	695.851	614.574	252.792	9.829.260	272.712	666.229	8.811.073	1.856.081
Persons at risk of severe poverty	26.079.338	3.681.575	411.809	344.485	696.127	286.622	207.513	221.780	48.003	4.463.144	83.196	94.394	2.680.882	768.302
Persons at risk of poverty and social exclusion (EU-2020)	90.562.528	14.234.702	1.529.224	2.151.904	2.231.762	913.722	919.506	798.084	308.177	12.384.480	306.132	870.333	11.666.252	3.033.097

Cohort	EU-26	Hungary	Ireland	Italy	Latvia	Luxembourg	Malta	Netherlands	Poland	Portugal	Romania	Sweden	Czechia	Cyprus
Persons in sample	528.045	14.363	10.683	43.400	13.215	7.461	9.555	28.573	38.832	27.698	16.966	14.102	18.758	10.952
Households in sample	228.181	6.530	4.243	20.831	960.9	2.783	3.826	13.211	15.281	11.367	7.356	5.781	8.618	4.192
Persons represented	436.558.564	9.578.774	4.980.329	60.127.687	1.884.981	598.541	505.014	17.148.722	37.067.779	10.295.909	19.348.575	10.327.589	10.458.507	884.233
Households represented	190.711.098	4.120.011	1.913.716	26.042.644	825.448	266.728	206.868	7.997.800	13.327.898	4.099.052	7.518.227	5.131.782	4.464.505	334.000
Equivalent consumption units	301.257.562	6.594.375	3.258.889	41.574.704	1.299.143	412.891	343.007	12.063.911	24.089.131	6.940.734	12.900.406	7.389.043	7.138.104	581.875
Under 3 years	10.558.665	241.174	169.035	717.402	53.898	19.325	19.321	503.213	1.036.492	212.528	181.240	329.535	298.811	26.818
3 to 13 years	48.905.398	1.009.852	771.632	6.226.444	218.609	73.364	45.349	1.996.018	4.220.744	1.019.249	2.381.189	1.329.531	1.283.186	105.973
0 to 13 years	59.464.063	1.251.026	940.667	6.943.845	272.507	92.689	64.670	2.499.230	5.257.236	1.231.777	2.562.429	1.659.065	1.581.997	132.792
14 to 15 years	8.913.154	182.830	131.113	1.104.912	42.702	15.747	25.699	353.484	628.435	221.898	543.324	260.860	183.675	16.570
14 to 17 years	18.136.699	380.113	261.358	2.223.497	86.973	26.604	25.699	782.123	1.255.998	430.197	972.570	532.538	414.692	36.664
0 to 16 years	72.966.430	1.539.885	1.137.880	8.597.310	337.439	113.923	69:06	3.054.120	6.192.334	1.550.961	3.322.882	2.064.947	1.881.678	158.881
16 and over	368.181.346	8.144.918	3.908.550	52.078.930	1.569.773	490.105	414.645	14.296.008	31.182.108	8.842.234	16.242.822	8.407.664	8.692.834	734.871
16 to 17 years	9.223.544	197.283	130.245	1.118.586	44.271	10.857	no data	428.639	627.564	208.299	429.246	271.678	231.016	20.094
Under 18 years	77.600.761	1.631.139	1.202.025	9.167.343	359.480	119.293	90.369	3.281.353	6.513.235	1.661.974	3.534.999	2.191.604	1.996.689	169.456
18 and over	358.957.802	7.947.635	3.778.304	50.960.345	1.525.501	479.248	414.645	13.867.369	30.554.544	8.633.935	15.813.576	8.135.985	8.461.818	714.777
18 to 25 years	36.519.048	904.149	495.341	4.693.240	124.369	55.653	77.810	1.697.346	2.869.607	877.861	1.632.173	898.880	714.625	97.129
26 to 40 years	82.185.446	1.555.898	1.024.434	10.202.560	347.533	134.956	125.638	3.240.140	8.165.407	1.800.989	3.787.841	2.128.835	2.122.003	221.860
41 to 50 years	62.170.354	1.523.117	735.693	9.178.082	293.401	94.702	60.010	2.224.403	5.380.062	1.572.847	3.121.835	1.243.681	1.665.900	109.888
51 to 55 years	32,457,618	769.261	297.760	4.894.097	125.446	42.141	30.632	1.276.427	2.208.434	750.855	1.348.501	717.879	693.165	54.609
56 to 60 years	30.154.131	724.669	289.165	4.402.078	137.130	41.300	30.758	1.208.619	2.325.695	738.468	980.695	618.131	622.017	54.815
61 to 65 years	29.523.276	798.247	251.754	3.837.856	128.701	32.959	28.011	1.097.932	2.731.309	664.146	1.406.230	542.423	645.889	48.062
66 to 75 years	54.695.959	1.043.899	403.534	6.688.979	205.712	47.624	43.498	1.889.370	4.199.884	1.176.974	2.115.133	1.098.190	1.256.532	75.496
76 to 80 years	10.876.835	286.184	109.276	2.163.467	59.591	13.566	no data	511.753	904.424	390.682	521.739	343.904	314.811	19.848
Over 80 years	20.375.135	342.211	171.347	4.899.985	103.619	16.346	18.288	721.381	1.769.721	661.115	899.430	544.063	426.875	33.070
Men	213.491.950	4.584.095	2.465.274	29.267.525	867.683	301.262	261.433	8.528.354	17.925.524	4.859.977	9.463.630	5.195.814	5.155.932	432.791
Women	223.066.613	4.994.679	2.515.055	30.860.162	1.017.298	297.279	243.581	8.620.368	19.142.255	5.435.932	9.884.945	5.131.775	5.302.575	451.442
Households at risk of poverty	34.970.421	602.730	342.175	5.291.391	237.514	43.597	41.417	1.265.560	2.317.140	704.103	1.809.088	949.279	267.099	54.137
Households at risk of severe poverty	12.825.147	274.439	49.398	2.464.900	99.530	13.819	10.055	384.110	805.229	248.525	796.901	304.629	78.751	10.394
Households in severe material deprivation (EU-2020)	11.100.804	336.813	101.734	2.075.812	74.310	4.602	8.165	214.276	431.403	218.233	1.097.312	89.821	113.751	24.769
Persons under- or unemployed (EU-2020)	25.883.219	351.412	496.784	4.231.311	107.754	38.475	20.877	1.123.928	1.164.368	372.567	902.494	640.368	339.455	38.855
Persons at risk of poverty	71.672.911	1.174.489	694.781	12.060.137	406.961	103.929	85.369	2.291.016	5.498.172	1.665.279	4.524.184	1.662.155	992.635	126.535
Persons at risk of severe poverty	26.079.338	541.438	104.410	5.514.298	169.184	29.490	19.305	579.411	1.632.173	597.276	2.175.105	529.760	176.912	22.745
Persons at risk of poverty and social exclusion (EU-2020)	90.562.528	1.700.778	1.037.488	15.387.634	489.316	125.091	95.834	2.761.188	6.430.871	2.036.478	5.873.022	1.846.374	1.243.083	187.996

Source: EUROSTAT, prepared by the authors.

Table 3 shows the Gross and Disposable Income values for households in each of the states. In the case of Gross Income, this provides the aggregate income received by the households, ¹⁷ while the value of Disposable Income obtained by subtracting from the previous the following concepts: Wealth Tax, Gross Periodic Transfers paid to other households, and Taxes and social contributions. ¹⁸ The most notable values for the entire EU are a Gross Income of 8.40 billion euros, an aggregate of Taxes and social contributions over 2.25 billion euros and Disposable Income of 6.04 billion euros. ¹⁹

¹⁷ The Gross Income of a household is the sum of the different aggregated incomes received, from Gross income from rental of a property to Repayments/receipts for tax adjustment – which is a negative figure in this aggregation – and the individual incomes received by each person in the household, from the gross monetary income of the wage earner to the gross education allowance.

¹⁸ It should also be noted that there are certain values N/A – lacking data – mostly for the item of "Repayments/ receipts for tax adjustment" for which a good number of states do not provide data.

¹⁹ Please note that this aggregation of Taxes and social contributions is an issue for the UBI financing model we propose, since it is necessary to ascertain the amount of the two items separately. This is also the case, as noted above, where various Gross Income components are accounted for in the total household and the amount corresponding to each person is not known. In item Taxes and social contributions, the two come together. In a later section, we will detail the individual allocation made of all these aggregated components.

Table 3: Composition of gross and net income of households

EU/SILC Code	Cohort (amounts in million euros) Member State	EU-26	Germany	Austria	Belgium	B ulg aria	Croatia	Denmark	Slovakia	Slovenia	Spain
ample_p	Sample persons	528.045	23.925	12.274	16.105	16.625	18.865	13.521	13.800	24.794	38.011
sample_H	Sample households	228.181	12.350	6.021	7.088	7.313	7.716	6.562	5.542	8.539	15.043
PERSONS	Persons represented	436.556.492	80.988.833	8.757.572	11.363.821	6.962.424	3.935.638	5.774.377	5.389.916	2.055.303	46.874.430
H.HOLDS	Households represented	190.711.098	40.780.161	3.990.132	4.993.966	2.931.327	1.435.193	2.920.885	1.852.059	834.520	18.773.903
OECD	Equivalent consumption units	301.257.562	58.780.712	6.135.123	7.792.940	4.759.528	2.580.009	4.167.950	3.460.739	1.381.747	31.548.106
HY010	Total household gross income	8.402.799,61	2.169.656,26	248.342,32	288.039,28	33.569,51	28.253,66	233.258,73	39.096,53	28.064,13	69,869.969
HY040G	Gross income from rental of a property	134.537,63	28.437,19	4.689,66	4.143,03	412,87	349,13	146,57	32,06	228,32	11.045,74
HY050G	Gross family/child-related allowances	148.197,18	58.687,96	6.439,98	6.362,60	729,86	360,64	2.712,11	863,30	594,52	1.213,81
HY060G	Gross social exclusion income	41.789,51	2.875,86	1.259,86	1.549,44	6,62	53,96	395,76	80,04	279,36	3.493,47
HY070G	Gross housing allowances	36.572,13	10.762,66	252,95	47,36	0'0	6,98	1.625,84	00'0	18,40	823,86
H Y080G	Gross regular inter-household cash transfers received	42,775,93	14.530,13	1.435,01	970,24	349,73	144,86	519,89	154,22	74,29	3.248,48
H Y090G	Gross interests, dividends, profit from capital investments	164.826,15	25.211,31	2.359,94	2.758,35	581,82	26,17	5.478,54	18,71	29'69	9.780,70
HY110G	Gross income received by under 16s	2.317,52	264,69	116,12	62,25	25,27	30,96	466,86	0,83	9,46	368,06
HY145N	Repayments /receipts for tax adjustment	-14.384,45	no data	-116,14	00'0	00'0	15,72	no data	no data	-243,27	-3.878,08
PY010G	Gross employee cashor near cash income	5.174.178,90	1.424.571,86	149.540,47	180.901,19	22.628,90	18.558,60	154.526,11	25.393,16	18.854,19	437.770,61
PY021G	Gross non-cash employee income (company car)	27.860,13	13.047,12	00'0	857,15	19,91	74,31	884,94	47,31	69,74	751,28
PY050G	Gross cash benefits or losses from self-employment	671.826,27	133.804,86	21.222,92	19.945,20	2.884,04	2.731,24	14.357,33	4.320,08	1.309,82	42.477,35
PY080G	Gross income from individual private pensions (not ESSPROS)	23.129,41	7.813,02	1.405,62	428,21	3,71	0,87	399,60	12,26	25,91	6.609,51
PY090G	Gross unemployment benefits	137.631,05	22.660,87	3.797,95	9.181,27	182,64	81,24	6.830,82	100,13	153,71	18.748,31
PY100G	Gross old-age benefits	1.459.094,02	341.490,23	45.401,92	48.953,28	4.549,46	4.324,97	34.686,77	6.328,63	4.171,56	113.875,09
PY110G	Gross survivar benefits	144.870,42	26.913,07	5.633,91	910,39	122,49	673,16	00'0	564,45	374,16	25.955,47
PY120G	Gross sickness benefits	26.772,39	6.312,66	1.255,08	2.209,38	335,20	65,67	847,21	156,92	549,03	3.715,89
PY130G	Gross disability benefits	119.236,18	21.596,57	3.154,65	8.612,52	642,98	725,40	5.611,79	1.016,93	676,44	15.370,90
PY140G	Gross education-related allowances	20.872,23	4.425,24	376,27	147,42	3,92	42,51	3.768,60	4,51	105,54	1.390,11
HY120G	Taxes on wealth	45.725,01	6.893,43	00'0	00'0	79'86	28,01	4.151,62	16,191	77,33	563,46
H Y130G	Regular inter-household cash transfer paid	63.827,03	24.539,40	2.097,61	1.272,37	84,42	100,35	1.014,38	82,32	148,76	5.407,37
HY140G	Taxes and social insurance contributions	2.252.784,01	608.498,44	64.318,40	73.031,24	5.603,84	6.162,94	87.658,96	7.715,23	6.304,17	114.494,77
HY020	Total household disposable income 6.040.463,54	6.040.463,54	1.529.725,00	181.926,32	213.735,66	27.782,62	21.962,36	140.433,77	31.237,07	21.533,87	576.173,02

EU/SILC Code	EU/SILC Code Cohort (amounts in million euros) Member State	EU-26	Estonia	Finland	France	Greece	Hungary	Ireland	Italy	Latvia	Luxembourg
d_aldmas	Sample persons	528.045	15.143	22.701	24.758	32.962	14.363	10.683	43.400	13.215	7.461
sample_H	Sample households	228.181	6.434	9.474	10.899	15.086	6.530	4.243	20.831	6.095	2.783
PERSONS	Persons represented	436.556.492	1.315.941	5.441.980	63.976.918	10.514.769	9.578.774	4.980.329	60.127.687	1.884.981	598.541
H. HOLDS	Households represented	190.711.098	626.028	2.787.200	28.421.366	4.115.678	4.120.011	1.913.716	26.042.644	825.448	266.728
OECD	Equivalent consumption units	301.257.562	930.222	3.954.332	44.138.768	7.041.174	6.594.375	3.258.889	41.574.704	1.299.143	412.891
HYOTO	Total household gross income	8.402.799,61	14.677,91	148.839,43	1.682.129,52	110.547,80	59.277,15	127.492,68	1.091.313,04	16.132,54	24.732,76
HY040G	Gross income from rental of a property	134.537,63	96,11	1.770,83	36.920,47	2.949,65	352,90	2.175,62	31.464,89	131,43	685,32
HY050G	Gross family/child-related allowances	148.197,18	620,67	2.640,95	25.528,40	1.064,98	2.014,50	5.057,86	6.622,23	473,52	569,59
HY060G	Gross social exclusion income	41.789,51	19,62	12,719	17.684,45	553,11	125,91	1.400,38	1.574,30	14,77	210,20
HY070G	Gross housing allowances	36.572,13	10,60	1.738,51	13.789,58	99'9	36,25	1.683,11	211,03	13,56	39,00
HY080G	Gross regular inter-household cash transfers received	42.775,93	56,26	315,17	7.778,80	1.458,32	527,84	276,32	3.962,35	184,34	49,80
HY090G	Gross interests, dividends, profit from capital investments	164.826,15	347,31	6.472,85	71.516,22	358,78	282,69	847,22	4.683,72	129,49	179,05
HY110G	Gross income received by under 16s	2.317,52	5,81	143,64	213,07	2,46	3,46	4,18	93,27	7,33	00'0
HY145N	Repayments/receipts for tax adjustment	-14.384,45	no data	nodata	no data	1.988,31	no data	-344,44	-12.103,12	no data	89,83
PY010G	Gross employee cash or near cash income	5.174.178,90	10.731,87	90.004,09	1.069.670,55	45.784,25	38.984,99	80.034,93	511.238,42	11.968,76	16.166,54
PY021G	Gross non-cash employee income (company car)	27.860,13	159,61	596,51	4.146,57	58,72	50,01	130,70	482,01	13,07	71,63
PY050G	Gross cash benefits or losses from self-employment	671.826,27	138,30	6.160,76	77.147,46	24.225,87	4.973,68	12.025,59	198.856,94	510,82	545,56
PY080G	Gross income from individual private pensions (not ESSPROS)	23.129,41	43,18	1.659,44	617,90	6,82	no data	467,70	135,04	24,62	12'6
PY090G	Gross unemployment benefits	137.631,05	113,62	3.691,84	31.887,69	435,81	260,67	3.125,93	26.867,00	174,75	315,97
PY100G	Gross old-age benefits	1.459.094,02	17,777,71	26.613,80	278.484,38	28.600,55	10.464,57	15.839,03	246.185,01	1.995,87	5.210,64
PY110G	Gross survivor' benefits	144.870,42	3,37	1.486,73	25.599,31	4.122,23	161,52	454,89	42.980,39	38,45	102,07
PY120G	Gross sickness benefits	26.772,39	116,30	259,89	3.176,57	24,74	83,92	504,14	no data	209,23	205,16
PY130G	Gross disability benefits	119.236,18	399,26	3.653,17	16.231,02	871,87	783,75	2.799,97	14.307,74	226,95	262,87
PY140G	Gross education-related allowances	20.872,23	38,29	713,74	1.737,44	22,97	108,00	664,80	1.648,69	15,59	109,63
HY120G	Taxes on wealth	45.725,01	15,10	533,26	18.333,25	1.739,14	211,92	379,80	7.353,75	66,92	00'0
HY130G	Regular inter-household cash transfer paid	63.827,03	255,20	708,81	14.246,71	903,95	221,75	471,07	4.740,43	108,00	370,10
HY140G	Taxes and social insurance contributions	2.252.784,01	2.001,02	36.203,72	553.290,14	36.857,59	11.121,39	27.220,28	262.321,07	2.774,31	6.067,66
HY020	Total household disposable income 6.040.463,54	6.040.463,54	12.406,58	111.393,63	1.096.259,41	71.047,12	47.722,09	99.421,54	816.897,79	13.183,31	18.295,00

EU/SILC Code	EU/SILC Code Cohort (amounts in million euros) Member State	EU-26	Malta	Netherlands	Poland	Portugal	Romania	Sweden	Czechia	Cyprus
sample_p	Sample persons	528.045	9.555	28.573	38.835	27.698	16.966	14.102	18.758	10.952
H_aldmes	Sample households	228.181	3.826	13.211	15.281	11.367	7.356	5.781	8.618	4.192
PERSONS	Persons represented	436.556.492	502.943	17.148.722	37.067.779	10.295.909	19.348.575	10.327.589	10.458.507	884,233
H. HOLDS	Households represented	190.711.098	206.868	7.997.800	13.327.898	4.099.052	7.518.227	5.131.782	4.464.505	334.000
OECD	Equivalent consumption units	301.257.562	343.007	12.063.911	24.089.131	6.940.734	12.900.406	7.389.043	7.138.104	581.875
HYOTO	Total household gross income	8.402.799,61	7.904,16	494.213,54	274.601,79	116.842,88	89.015,81	264.032,05	102.687,01	13.440,50
HY040G	Gross income from rental of a property	134.537,63	125,04	3.629,58	86'676	2.009,47	46,91	96'929	932,68	232,22
HY050G	Gross family/child-related allowances	148.197,18	88,49	4.891,02	10.750,92	759,29	1.535,25	5.985,14	1.443,22	186,33
HY060G	Gross social exclusion income	41.789,51	89,49	9.966,00	169,08	310,14	101,99	1.723,00	88,55	56,63
HY070G	Gross housing allowances	36.572,13	9,02	3.504,83	74,78	17,58	00'0	1.620,08	244,90	31,48
HY080G	Gross regular inter-household cash transfers received	42.775,93	23,44	2.450,52	991,61	817,45	72,90	636,01	1.483,06	264,89
HY090G	Gross interests, dividends, profit from capital investments	164.826,15	143,52	17.985,70	296,22	820,04	24,96	13.683,90	172,64	19'96
HY110G	Gross income received by under 16s	2.317,52	0,02	148,36	90,25	4,02	151,69	105,47	00'0	00'0
HY145N	Repayments/receipts for tax adjustment	-14.384,45	nodata	no data	-1.456,13	1.657,14	5,74	00'0	00'0	nodata
PY010G	Gross employee cash or near cash income	5.174.178,90	5.499,57	303.454,08	172.108,39	72.961,55	66.493,64	172.762,72	64.814,19	8.755,28
PY021G	Gross non-cash employee income (company car)	27.860,13	77,7	3.784,76	175,02	283,94	286,82	1.433,60	419,18	8,48
PY050G	Gross cash benefits or losses from self-employment	671.826,27	763,23	45.077,81	27.003,30	8.337,41	4.009,70	4.132,52	13.852,00	1.012,48
PY080G	Gross income from individual private pensions (not ESSPROS)	23.129,41	28,82	44,67	13,21	231,11	1,02	2.996,20	106,45	44,79
PY090G	Gross unemployment benefits	137.631,05	26'6	4.538,43	516,77	1.122,48	18,80	2.228,70	373,96	211,73
PY100G	Gross old-age benefits	1.459.094,02	972,64	85.008,94	52.639,56	24.561,10	14.912,48	45.113,06	14.933,36	1.999,40
PY110G	Gross survivor' benefits	144.870,42	32,30	407,43	3.668,47	2.732,89	480,43	153,70	1.014,48	284,66
PY120G	Gross sickness benefits	26.772,39	29,56	1.107,40	262,90	540,97	1,76	3.916,86	545,63	40,31
PY130G	Gross disability benefits	119.236,18	49,51	9.999,72	4.674,54	1.187,95	849,23	3.131,32	2.246,01	153,12
PY140G	Gross education-related allowances	20.872,23	31,79	1.214,29	216,61	145,47	28,22	3.832,80	16,70	63,09
HY120G	Taxes on wealth	45.725,01	00'0	00'0	845,50	1.028,43	437,92	2.730,41	157,04	18,19
HY130G	Regular inter-household cash transfer paid	63.827,03	33,18	3.165,85	787,33	664,73	15,53	358,71	1.778,61	250,10
HY140G	Taxes and social insurance contributions	2.252.784,01	1.403,09	143.604,42	59.407,12	26.868,72	26.160,59	65.022,88	16.809,67	1.862,36
HY020	Total household disposable income 6.040.463,54	6.040.463,54	6.467,88	347.443,27	213.561,84	88.281,00	62.401,77	195.920,04	83.941,70	11.309,85

Source: EUROSTAT, prepared by the authors.

Table 4 shows five concept groups for the 26 states: 1) details of people and households; 2) aggregate Gross and Net Income and taxes; 3) Average gross and net income, by household and person; 4) indicators of poverty and exclusion by households and individuals; and 5) indicators of inequality, progressiveness and redistribution.²⁰ ²¹ The results offer an overview of the situation in which the 26 states analysed find themselves, especially in terms of poverty, social exclusion and inequality, which are among the main issues that the UBI aims to eradicate.

²⁰ The measure of inequality is via the Gini coefficient, which ranges from 0 to 1; the lower figure shows theoretically absolute equality, where income is distributed equally among all, while the higher figure indicates absolute inequality, where all the income is theoretically received by a single person. See: GINI, "Variabilità e Mutuabilità. Contributo allo Studio delle Distribuzioni e delle Relazioni Statistiche." The measure of progressiveness used is the Suits index. This index ranges from -1 to 1. It can be applied for any tax and always regards income distribution. The lowest value -1 indicates a regressive tax – higher incomes pay proportionally less tax, the central value 0 indicates a proportional tax - taxpayers pay the same proportion regardless of their income. And finally, the positive value 1 corresponds to a progressive tax – the higher the income, the greater proportion the taxpayer pays. Values between 0.25 and 0.4 are usually considered indicative of a progressive tax. The Suits index may also be used to calculate tax transfers and benefits, but it should be noted that then its values and interpretation are reversed with regard to the case of a tax. SUITS, "Measurement of Tax Progressivity." An alternative to the Suits index is the Kakwani index, although we will not use it here due to its redundancy. To learn more, see: KAKWANI, "Measurement of Tax Progressivity: An International Comparison." Finally, redistributive effect is also of interest. This is the capacity for transfers from the wealthy to the poor generated by the application of a tax on the distribution of income. A simple way to calculate the redistributive effect is to quantify the difference between the Gini index, where the tax has not been applied – the gross income – with the Gini index obtained after discounting the tax – the net income. However, the Reynolds-Smolensky index is the basis for calculating the redistributive effect, although this is somewhat more complex than the simple difference between the Gini indices as described. The simplicity of this latter operation – which gives very precise approximations – and its simple interpretation make it a frequent alternative. For further details, see REYNOLDS; SMOLENSKY, Public Expenditures, Taxes and the Distribution of Income:

²¹ There are certain values N/A – lacking data – for items in the Suits Index on wealth tax, since Austria, Belgium, Luxembourg, Malta and the Netherlands do not collect them.

Table 4: Income, risk of poverty, exclusion, inequality and redistribution

Cohort	Germany	Austria	Belgium	Bulgaria	Croatia	Denmark	Slovakia	Slovenia	Spain	Estonia
Sample persons	23.925	12.274	16.105	16.625	18.865	13.521	13.800	24.794	38.011	15.143
Sample households	12.350	6.021	7.088	7.313	7.716	6.562	5.542	8.539	15.043	6.434
Persons represented	80.988.833	8.757.572	11.363.821	6.962.424	3.935.638	5.774.377	5.389.916	2.055.303	46.874.430	1.315.941
Households represented	40.780.161	3.990.132	4.993.966	2.931.327	1.435.193	2.920.885	1.852.059	834.520	18.773.903	626.028
Equivalent consumption units	58.780.712	6.135.123	7.792.940	4.759.528	2.580.009	4.167.950	3.460.739	1.381.747	31.548.106	930.222
Under 60s	45.905.620	5.103.757	6.268.697	3.849.038	2.215.567	3.212.111	3.158.488	1.172.163	27.266.920	731.847
Gross household income (million euros)	2.169.656,26	248.342,32	288.039,28	33.569,51	28.253,66	233.258,73	39.096,53	28.064,13	696.638,63	14.677,91
Taxes and social contributions (million euros)	608.498,44	64.318,40	73.031,24	5.603,84	6.162,94	87.658,96	7.715,23	6.304,17	114.494,77	2.001,02
Tax on wealth (million euros)	6.893,43	00'0	00'0	98,62	28,01	4.151,62	61,91	77,33	563,46	15,10
Net household income (million euros)	1.529.725,00	181.926,32	213.735,66	27.782,62	21.962,36	140.433,77	31.237,07	21.533,87	576.173,02	12.406,58
Average gross household income (thousand euros)	53.204	62.239,12	57.677,46	11.451,98	19.686	79.859	21.110	33.629	37.107	23.446
Average net household income (thousand euros)	37.512	45.594	42.799	9.478	15.303	48.079	16.866	25.804	30.690	19.818
Average gross personal income (thousand euros)	26.790	28.357	25.347	4.822	7.179	40.395	7.254	13.654	14.862	11.154
Average net personal income (thousand euros)	18.888	20.774	18.808	3.990	5.580	24.320	5.795	10.477	12.292	9.428
Average equivalent gross income (thousand euros)	36.911	40.479	36.962	7.053	10.951	55.965	11.297	20.311	22.082	15.779
Average equivalent netincome (thousand euros)	26.024	29.653	27.427	5.837	8.513	33.694	9.026	15.585	18.263	13.337
% households at risk of poverty	19,68%	15,61%	16,02%	28,12%	23,68%	16,07%	11,82%	17,85%	20,52%	29,06%
% households at risk of severe poverty	%/8/9	5,04%	3,32%	10,13%	%6'6	5,16%	3,72%	3,68%	9,20%	8,66%
% households in severe material deprivation	3,64%	2,68%	4,65%	22,72%	9,25%	3,21%	6,55%	4,20%	6,52%	3,43%
% persons at risk of poverty	15,04%	13,95%	14,10%	23,85%	18,30%	12,05%	11,40%	12,30%	20,97%	20,72%
% persons at risk of severe poverty	4,55%	4,70%	3,03%	10,00%	7,28%	3,59%	4,11%	2,34%	9,52%	6,32%
Persons under- or unemployed	%09'6	9,11%	16,28%	11,01%	11,01%	11,74%	5,57%	6,28%	12,71%	6,17%
AROPE rate (% Persons at risk of poverty or social exclusion)	17,58%	17,46%	18,94%	32,05%	23,22%	15,92%	14,81%	14,99%	26,42%	23,26%
Gini Index for gross Income	0,3256	0,3193	0,3189	0,4148	0,3238	0,3206	0,2389	0,2874	0,3580	0,3447
Gini Index for net Income	0,2877	0,2699	0,2537	0,4004	0,2835	0,2733	0,2095	0,2350	0,3209	0,3052
Suits index for taxes and social contributions against gross income	0,1340	0,1655	0,2127	0,0702	0,1642	0,0826	0,1502	0,2045	0,2380	0,3376
Suits index for taxes and social contributions against net income	0,0893	0,1640	0,2284	0,0548	0,1796	0,1122	0,1233	0,2122	0,2456	0,3629
Suits index for tax on wealth against gross income	-0,0640	no data	no data	-0,2667	0,0802	-0,0108	-0,1994	-0,2353	-0,1020	-0,0675
Suits index for tax on wealth against net income	-0,0301	no data	no data	-0,2490	0,1028	-0,0053	-0,1636	-0,1745	-0,2285	-0,0325
Redistributive effect	0,0380	0,0494	0,0653	0,0144	0,0404	0,0473	0,0294	0,0524	0,0371	0,0395

Cohort	Finland	France	Greece	Hungary	Ireland	Italy	Latvia	Luxembourg	Malta	Netherlands
Sample persons	22.701	24.758	32.962	14.363	10.683	43.400	13.215	7.461	9.555	28.573
Sample households	9.474	10.899	15.086	6.530	4.243	20.831	9609	2.783	3.826	13.211
Persons represented	5.441.980	63.976.918	10.514.769	9.578.774	4.980.329	60.127.687	1.884.981	598.541	502.943	17.148.722
Household's represented	2.787.200	28.421.366	4.115.678	4.120.011	1.913.716	26.042.644	825.448	266.728	206.868	7.997.800
Equivalent consumption units	3.954.332	44.138.768	7.041.174	6.594.375	3.258.889	41.574.704	1.299.143	412.891	343.007	12.063.911
Under 60s	2.900.275	33.284.249	5.835.222	5.477.094	2.842.393	33.370.057	1.027.878	368.752	324.848	9.646.933
Gross household income (million euros)	148.839,43	1.682.129,52	110.547,80	59.277,15	127.492,68	1.091.313,04	16.132,54	24.732,76	7.904,16	494.213,54
Taxes and social contributions (million euros)	36.203,72	553.290,14	36.857,59	11.121,39	27.220,28	262.321,07	2.774,31	99'290'9	1.403,09	143.604,42
Tax on wealth (million euros)	533,26	18.333,25	1.739,14	211,92	379,80	7.353,75	66,93	00'0	00'0	00'0
Net household income (million euros)	111.393,63	1.096.259,41	71.047,12	47.722,09	99.421,54	816.897,79	13.183,31	18.295,00	6.467,88	347.443,27
Average gross household income (thousand euros)	53.401	59.185	26.860	14.388	66.620	41.905	19.544	92.726	38.209	61.794
Average net household income (thousand euros)	39.966	38.572	17.263	11.583	51.952	31.368	15.971	98.290	31.266	43.442
Average gross personal income (thousand euros)	27.350	26.293	10.514	6.188	25.599	18.150	8.558	41.322	15.716	28.819
Average net personal income (thousand euros)	20.469	17.135	6.757	4.982	19.963	13.586	6.994	30.566	12.860	20.261
Average equivalent gross income (thousand euros)	37.640	38.110	15.700	8.989	39.122	26.249	12.418	59.901	23.044	40.966
Average equivalent netincome (thousand euros)	28.170	24.837	10.090	7.237	30.508	19.649	10.148	44.310	18.856	28.800
% households at risk of poverty	16,05%	14,47%	17,04%	14,63%	17,88%	32%	28,77%	16,35%	20'02%	15,82%
% households at risk of severe poverty	2,69%	2,00%	6,71%	%99'9	2,58%	6,46%	12,06%	5,18%	4,86%	4,80%
% households in severe material deprivation	3,36%	2,00%	16,53%	8,18%	5,32%	7,97%	%00′6	1,73%	3,95%	2,68%
% persons at risk of poverty	12,24%	13,77%	17,65%	12,26%	13,95%	20,06%	21,59%	17,36%	16,97%	13,36%
% persons at risk of severe poverty	1,73%	4,19%	7,31%	2,65%	2,10%	9,17%	8,98%	4,93%	3,84%	3,38%
Persons under- or unemployed	12,96%	12,14%	16,11%	6,42%	17,48%	12,68%	10,48%	10,43%	6,43%	11,65%
AROPE rate (% Persons at risk of poverty or social exclusion)	15,99%	18,24%	28,85%	17,76%	20,83%	25,59%	25,96%	20,90%	19,05%	16,10%
Gini Index for gross Income	0,3137	0,3615	0,3370	0,3238	0,3547	0,3710	0,3733	0,3338	0,3391	0,3304
Gini Index for net Income	0,2650	0,2927	0,3141	0,2802	0,2867	0,3284	0,3451	0,3117	0,3033	0,2824
Suits index for taxes and social contributions against gross income	0,1571	0,1708	6890'0	0,2538	0,2758	0,1629	0,1620	0,1034	0,1853	0,1284
Suits index for taxes and social contributions against net income	0,1899	0,1885	0,0668	0,0851	0,2731	0,1787	0,1574	0,0453	0,2116	0,1475
Suits index for tax on wealth against gross income	-0,0654	-0,1243	-0,0342	-0,1772	-0,0948	0,0847	-0,2022	no data	no data	no data
Suits index for tax on wealth against net income	-0,0198	-0,0417	-0,0882	-0,1264	-0,0283	0,0807	-0,1869	no data	no data	no data
Redistributive effect	0,0487	0,0688	0,0229	0,0437	0,0680	0,0426	0,0282	0,0221	0,0358	0,0480

Cohort	Poland	Portugal	Romania	Sweden	Czechia	Cyprus
Sample persons	38.835	27.698	16.966	14.102	18.758	10.952
Sample households	15.281	11.367	7.356	5.781	8.618	4.192
Persons represented	37.067.779	10.295.909	19.348.575	10.327.589	10.458.507	884.233
Households represented	13.327.898	4.099.052	7.518.227	5.131.782	4.464.505	334,000
Equivalent consumption units	24.089.131	6.940.734	12.900.406	7.389.043	7.138.104	581.875
Under 60s	20.949.206	5.741.019	10.871.044	5.607.406	5.817.711	538.301
Gross household income (million euros)	274.601,79	116.842,88	89.015,81	264.032,05	102.687,01	13.440,50
Taxes and social contributions (million euros)	59.407,12	26.868,72	26.160,59	65.022,88	16.809,67	1.862,36
Tax on wealth (million euros)	845,50	1.028,43	437,92	2.730,41	157,04	18,19
Net household income (million euros)	213.561,84	88.281,00	62.401,77	195.920,04	83.941,70	11.309,85
Average gross household income (thous and euros)	20.604	28.505	11.840	51.450	23.001	40.241,03
Average net household income (thousand euros)	16.024	21.537	8.300	38.178	18.802	33.862
Average gross personal income (thousand euros)	7.408	11.348	4.601	25.566	9.819	15.200
Average net personal income (thousand euros)	5.761	8.574	3.225	18.971	8.026	12.791
Average equivalent gross income (thousand euros)	11.399	16.834	9.900	35.733	14.386	23.099
Average equivalent net income (thousand euros)	8.865	12.719	4.837	26.515	11.760	19.437
% households at risk of poverty	17,39%	17,18%	24,06%	18,50%	12,70%	16,21%
% households at risk of severe poverty	5,08%	%90′9	10,60%	5,94%	1,76%	3,11%
% households in severe material deprivation	3,24%	5,32%	14,60%	1,75%	2,55%	7,42%
% persons at risk of poverty	14,83%	16,17%	23,38%	16,09%	9,49%	14,31%
% persons at risk of severe poverty	4,40%	2,80%	11,24%	5,13%	1,69%	2,57%
Persons under- or unemployed	5,56%	6,49%	8,30%	11,42%	5,83%	7,22%
AROPE rate (% Persons at risk of poverty or social exclusion)	17,35%	19,78%	30,35%	17,88%	11,89%	21,26%
Gini Index for gross Income	0,2842	0,3731	0,3887	0,3064	0,2795	0,3271
Gini Index for net Income	0,2717	0,3119	0,3379	0,2694	0,2415	0,2932
Suits index for taxes and social contributions against gross income	0,0607	0,2328	0,1595	0,1317	0,2098	0,2304
Suits index for taxes and social contributions against net income	0,0479	0,2695	0,1421	0,1575	0,2198	0,2159
Suits index for tax on wealth against gross income	-0,2300	-0,0610	-0,2789	-0,0469	-0,1792	-0,0462
Suits index for tax on wealth against net income	-0,2313	-0,0091	-0,2173	-0,0280	-0,1346	-0,0245
Redistributive effect	0,0125	0,0612	0,0508	0,0370	0,0379	0,0338

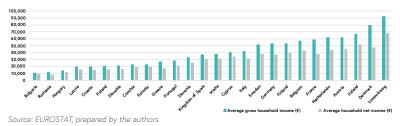
Chart 2 visualises the differences in average incomes, both gross and net, between the different states.

The most remarkable result in table 4 is the significant number of states that exceed 20% of households at risk of poverty.²² Estonia: 29.06%; Bulgaria: 28.12%; Romania: 24.06%; Croatia: 23.68%; Spain: 20.52%; Italy: 23.52% and Malta: 20.02%. In contrast, others show figures below 15%. Slovakia: 11.82%; the Czech Republic: 12.70%; France: 14.47% and Hungary: 14.63%.

Source: EUROSTAT, prepared by the authors.

²² Households whose equivalent net income is lower than their at-risk-of-poverty threshold.

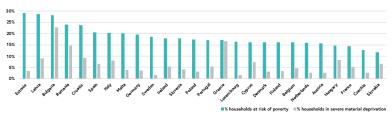
Chart 2: Average gross and net income



Regarding the percentage of households in severe material deprivation,²³ we see the highest figures in Bulgaria: 22.72%; Greece: 16.73%; Romania: 14.60%; Croatia: 9.25%; Latvia: 9.00%; Hungary: 8.1% and Italy: 7.97%, that reach or exceed 8%. At the other end of the scale, clearly below 3%, are Sweden: 1.75%; the Czech Republic: 2.55% and Austria and the Netherlands at 2.68%.

Chart 3 represents the two concepts above, sorted in descending order by the percentage of households at risk of poverty.

Chart 3: Households at risk of poverty and severe material deprivation



Source: EUROSTAT, prepared by the authors

Another interesting indicator to look at is the proportion of the under- and unemployed.²⁴ Thus, we see that Ireland at 17.48%; Belgium: 16.28%; Finland: 12, 91%; Spain: 12.71%; Italy: 12.68% and France: 12.14% are those with the highest figures. At the other end are Poland with 5.56%; Slovakia: 5.57% and the Czech Republic at 5.83%.

However, this indicator penalizes voluntary part-time work, which is beginning to take root, as shown by the fact that Ireland, Belgium and Finland are among the states with the highest figures.

²³ To define severe material deprivation, up to nine factors of deprivation are considered that the citizen cannot afford: 1) Regular payment of rent, mortgage and utilities; 2) Maintain an appropriate temperature in the home; 3) Face unexpected expenses; 4) Allow for a meal every two days with meat, chicken or fish, or the equivalent for vegetarians; 5) Go on holiday at least one week a year; 6) Have a television set; 7) Have a washing machine; 8) Have a car; 9) Have a telephone. When at least four of these nine deprivations occur, the household is considered to be in severe material deprivation.

²⁴ The concept of under- or unemployment refers to persons aged 0 to 59 living in households where adults aged 18 to 59 – but excluding students aged 18 to 24 – worked a working day equal to or less than 20% of their potential total combined work time during the previous year.

Regarding the At Risk Of Poverty and/or Exclusion or AROPE rate²⁵ designed to analyse the role of citizens in inclusive societies, this indicator is an aggregate of the percentage of the population that is in a situation of poverty, severe material deprivation, or in families of the under- or unemployed, as seen above. In this case, there are six states that exceed 25%, Bulgaria with 32.05%; Romania: 30.35%; Greece: 28.85%; Spain: 26.42%; Latvia: 25.96% and Italy at 25.59%. Meanwhile the Czech Republic at 11.89%; Slovakia: 14.81%; Slovenia: 14.99%; Denmark: 15.92%; Finland: 15.99% and the Netherlands at 16.10% come below or around 16%.

Chart 4 below gives an overview of these two concepts, in descending order of the AROPE rate.

Chart 4: AROPE rate and Under- or Unemployment

Source: EUROSTAT, prepared by the authors

The Gini index discussed above gives us an idea of income inequality in each of the states analysed. Regarding the Gross Income Gini index, we see how Bulgaria at 0.4148; Romania: 0.3837; Latvia: 0.3733; Italy: 0.3710; France: 0.3615; Spain: 0.3580 and Ireland at 0.3547 show a high degree of inequality with Gini indexes above 0.35. On the other hand, Slovakia at 0.2389; the Czech Republic at 0.2795, and Slovenia at 0.2874 starts with much greater equality with Gini indexes below 0.29.

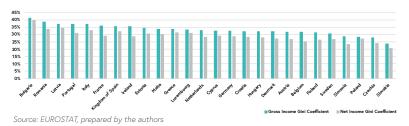
In applying the Gini index for Net Income, we see some variations. Here, the states with the greatest inequality are Bulgaria at 0.4004; Latvia: 0.3451; Romania: 0.3379; Italy: 0.3284 and Spain at 0.3205, all above 0.32. In contrast, Slovakia with 0.2095; Slovenia: 0.2350; the Czech Republic: 0.2415; Belgium: 0.2537; Finland: 0.2650; Sweden: 0.2694 and Austria at 0.2699 manage to maintain their inequality below 0.27.

²⁵ The AROPE rate is included in the Europe-2020 strategy. It is quantified among people who are in any of the situations defined in footnotes 23, 24 and 25. It should be noted that in the 2021 wave of the EUSILC, a methodological change has been introduced in the definition of the indicator Under- or unemployment. The new indicator of severe material and social deprivation has been created and consequently the AROPE rate has been modified definition. These changes are due to the closure of the Europe-2020 strategy objectives and the coming into force of the Action Plan of the European Pillar of Social Rights, which has been named the Europe-2030 strategy. Consult EUROPEAN COMMISSION, "The European Pillar of Social Rights Action Plan," for details of these new objectives. Obviously, none of these new indicators are included in the 2020 EU-SILC database, which is the reference for our study.

Finally, analysis of the indicator of the redistributive effect in Table 4 is also of interest. France, Ireland, Belgium and Portugal, in that order, have reduced their inequality most, by effect of their tax system which places them above 6% in transfer from the wealthy to the poor. On the other hand, Bulgaria, Poland, Luxembourg, Greece, Latvia and Slovakia, in that order, are those with the least redistributive tax systems, where transfers from the wealthy to the poor are below 3%.

Finally, Chart 5 shows the results of the different Gini indexes for each State, differentiating between Gross and Net Income, ordered from highest to lowest according to the Gini index on Gross Income.

Chart 5: Gini Index - Gross and Net Income



Allocation/attribution of aggregate income and data cleaning

As noted in the previous heading, certain components in Gross and Net Income are not individualized by household members. This is the case of:

- Gross income from rental of a property [HY040G]. Gross family/child-related allowances [HY050G]. Gross social exclusion income [HY060G]. Gross housing allowances [HY070G]. Gross regular inter-household cash transfers received [HY080G]. Gross interests, dividends, profit from capital investments [HY090G]. Gross income received by under 16s [HY110G]. Repayments/receipts for tax adjustment [HY145N]. Taxes on wealth [HY120G]. Regular inter-household cash transfer paid [HY130G]. Taxes and social insurance contributions [HY140G]. On the other hand, there is also a set of components that are individualised. This is the case of: Taxes and social insurance contributions [PY010G]. Gross non-cash employee income (company car) [PY021G].
- 2. Gross cash benefits or losses from self-employment [PY050G]. Gross income from individual private pensions (not ESSPROS) [PY080G].

 Gross unemployment benefits [PY090G]. Gross old-age benefits [PY100G]. Gross survivor' benefits [PY110G]. Gross sickness benefits [PY120G]. Gross disability benefits [PY130G]. Gross education-related allowances [PY140G].

Since the UBI model we mean to develop is individual, it is essential to allocate/attribute these aggregate components to the different persons in the household. 26 27 As will be seen later on, the objective is to establish the Gross Personal Income – because that is the value that indicates the person's situation in the distribution of income – and the Net Personal Income – because that is the reference that determines who benefits or is harmed by the implementation of a UBI.

It has also been commented in the previous heading that the fact it is not possible to make the two concepts in the "Taxes and social insurance contributions [HY140G]" component separately is a problem, since for the financing model we propose, it is also essential to ascertain the personal share of income tax, separate from social contributions, and consequently it will also be necessary to find a way to carry out this disaggregation²⁸ and subsequent attribution.²⁹

- Taxes on individual or household income including holding gains [D51A_C1].
- · Compulsory employees' actual social contributions [D613CE].
- Compulsory actual social contributions by households [D613CN].
 Compulsory actual social contributions by the self-employed [D613CS].

The components that form part of the first phase of this allocation/attribution are the first six, and also the ninth and tenth in the list reproduced at the beginning of this section. This allocation/attribution requires the setting of objective criteria to implement. The first criterion we have applied is to carry it out only among the adults – over 18s – in the household; but since there are some households that are only made up of people under the age of eighteen in the microdata used, in such cases, if the circumstance requires attribution, they are considered adults for the purposes of allocation. There are three variables in the personal microdata that make it possible to identify who the father (RB220-PB160) and mother (RB230-PB170) are, in the broad sense of biological, adoptive or foster parents, and who is the partner (RB240-PB180), also in the broad sense of legal marriage, common-law partner, etc. These identifiers resolve a good part of the alternatives when it comes to allocation/attribution. We have therefore considered that in single-person households – 3.3.2% of those represented – the attribution is to the individual; in singleparent households – 3.7% – if there is a partner the attribution is equitable between the adults who form a couple, if there is no partner it is equitable between all those in the household; in households with two or more adults and dependent children – 25.9% – the attribution is equal between father and mother.

²⁷ The seventh component "Gross income received by under 16s [HY110G]" requires a new criterion, given that the allocation/attribution affects persons under the age of sixteen who live together in the household. Each is thus allocated the corresponding part of the aggregate amount.

²⁸ Regarding the disaggregation of the "Taxes and social insurance contributions [HY140G]" component, we have relied on the information provided by EUROSTAT selecting:

The sum of these components makes it possible to determine the aggregate value in each state, the share of income tax and social contributions separately. This percentage is applied to the [HY140G] component of each household, thus determining the allocation.

²⁰Once the income tax has been separated from the social security contributions for the household, it is necessary to carry out the allocation/attribution among the persons. The criterion used is obviously different from that indicated for the previous components, since it must take into account the individual income of each person, which depends on the other ten components that appear in the second list provided at the beginning of this heading. The share of Gross Personal Income – the sum of the ten individual components – must now be transferred to the total gross personal income received by the household, to the two previously segregated values. In the case of the eighth aggregate component – Taxes and social insurance contributions [HY145G] – this same criterion has been used, given the coincidence of the concept of this component with that of income tax.

Once the objectives of the allocation/attribution – gross and net personal income – had been obtained, it was necessary to calibrate the results, that is, to verify the coincidence of the two personal incomes, attributed to the household, with the original variables contained in the database of each household, as shown in Table 3 variables [HY010] and [HY020].

In the EU as a whole, there is a 0.12% shrinkage in the number of persons, which in turn represents 0.04% of total households.

Table 5 shows this calibration, indicating the consequences for each state of the allocation/attribution made.

In the EU as a whole, there is a 0.12% shrinkage in the number of persons, which in turn represents 0.04% of total households. The cases of Bulgaria, with 0.78% and 0.39%; Romania: 0.64% and 0.23%; Poland: 0.48% and 0.15% and Austria with 0.46%

and 0.39%; and Ireland with 0.14% and 0.37%, in terms of the respective loss of persons and households. In any case, it is clear that the resulting loss of information is insignificant, 30 and that the advantage of establishing individualization of income for the UBI financing model more than compensates for this loss. For the EU as a whole, the effect of the shrinkage in terms of gross income is $\leqslant 3,983.09$ million -0.05% – and $\leqslant 3,065.16$ million -0.05% – in net income, notably minor amounts and irrelevant with regard to the overall volume.

³⁰The reason for these allocation/attribution errors is fundamentally determined by incorrect transcription of the original microdata of identifier codes RB220-PB160, RB230-PB170, RB230-PB170, referred to in footnote 27, and which, as explained there, are the main basis for the individualization of income. Some other much less significant cases are caused by the non-equivalence of the original data for variables [HY010] and [HY020] with the sum of all the aggregated and individual components they determine.

Table 5: Attribution/distribution of household income

Member	Persons deleted			Households deleted			
state	Sample	Population	%	Sample	Population	%	
Germany	0	0	0,00%	0	0	0,00%	
Austria	60	39.959	0,46%	23	15.714	0,39%	
Belgium	12	10.337	0,09%	1	861	0,02%	
Bulgaria	153	54.609	0,78%	16	5.322	0,18%	
Croatia	20	5.753	0,15%	2	575	0,04%	
Denmark	0	0	0,00%	0	0	0,00%	
Slovakia	49	33.156	0,62%	5	3.526	0,19%	
Slovenia	63	1.531	0,07%	7	168	0,02%	
Spain	0	0	0,00%	0	0	0,00%	
Estonia	6	368	0,03%	1	61	0,01%	
Finland	0	0	0,00%	0	0	0,00%	
France	3	7.613	0,01%	2	5.446	0,02%	
Greece	0	0	0,00%	0	0	0,00%	
Hungary	14	11.982	0,13%	2	1.609	0,04%	
Ireland	1	7.028	0,14%	1	7.000	0,37%	
Italy	15	45.957	0,08%	2	6.334	0,02%	
Luxembourg	0	0	0,00%	0	0	0,00%	
Latvia	6	816	0,04%	1	136	0,02%	
Malta	0	0	0,00%	0	0	0,00%	
Netherlands	0	0	0,00%	0	0	0,00%	
Poland	95	179.768	0,48%	11	20.377	0,15%	
Portugal	0	0	0,00%	0	0	0,00%	
Romania	79	124.048	0,64%	12	17.526	0,23%	
Sweden	0	0	0,00%	0	0	0,00%	
Czechia	0	0	0,00%	0	0	0,00%	
Cyprus	17	1.646	0,19%	2	176	0,05%	
European Union	593	524.570	0,12%	88	84.832	0,04%	

3 The financial model for basic income

The main characteristics of the UBI model we propose are as follows:31

- The UBI is an individual, unconditional, and universal benefit.32
- The UBI replaces all other monetary benefits received from the state, as long as these are of a lesser amount than the UBI; when they are greater, the portion that exceeds shall continue to be received under the same conditions.³³ This generates savings for the state and, as will be seen, is an important element for financing.
- The UBI is not subject to income tax.
- The financing of the UBI is mainly achieved through the reform of income tax and with the introduction of a tax on wealth and a tax on carbon.
 Certain administrative measures and measures for certain groups of UBI

³¹ There are several previous studies on which this heading is based: ARCARONS (et al.), Un modelo de financiación de la Renta Básica para el conjunto del Reino de España: sí, se puede y es racional; ARCARONS; RAVENTOS; TORRENS, La renda básica incondicional: una proposta racional per al segle XXI; ARCARONS; RAVENTOS; TORRENS, La renda básica incondicional. Una propuesta de financiación racional y justa; ARCARONS; RAVENTOS; TORRENS, Renta básica incondicional. Una propuesta de financiación racional y justa; ARCARONS; RAVENTOS; TORRENS, Modelos de financiación para una renta básica; ARCARONS; RAVENTOS; TORRENS, Feasibility of Financing a Basic Income. In all the above, these are models applied to Spain as a whole or specific to Catalonia. In the first four, the information used is administrative, based on income tax returns, and in the last one, the information used is the Encuesta de Condiciones de Vida (Survey on Living Conditions) of 2019 for the entire Spanish State, with a very similar structure to that employed in the present study

³² The definition of UBI made by the Basic Income Earth Network (BIEN) is very clear: "... a basic income is an unconditional public monetary allocation to the entire population, stable in size and frequency and high enough to be, in combination with other social services, part of a policy strategy to eliminate material poverty and enable the social and cultural participation of every individual. We oppose the replacement of social services or entitlements, if that replacement worsens the situation of relatively disadvantaged, vulnerable, or lower-income people....". In other words, nothing to do with conditional subsidies such as Spain's Ingreso Mínimo Vital (Minimum Living Wage), for example. The Xarxa Renda Basica, official section of the BIEN, uses this short definition of the UBI: "It is an unconditional public monetary allocation to the entire population." Further information at www.rendabasica.org.

³³ Specifying the types of components that have been analysed in the previous section to define gross personal income, these are: "Gross social exclusion income [HY060G]," "Gross housing allowances [HY070G]," "Gross unemployment benefits [PY090G]," "Gross old-age benefits [PY100G]," "Gross survivor' benefits [PY110G]," "Gross sickness benefits [PY120G]," "Gross old-age benefits [PY130G]," and "Gross education-related allowances [PY140G]," If we consider A the sum of all these benefits individually perceived and R is the amount of UBI transferred, then if A s R, A is perceived as UBI and means a saving for the state. On the other hand, if A > R, the R part of A will be perceived and B and will also represent a saving for the state; and at the same time A-R will continue to be perceived under the same conditions as in the "ex-ante" situation.

beneficiaries also contribute to savings, although to a much lesser extent.

- The financing of the UBI does not diminish any amount that the states collect through their income tax, which is meant to be the base tax to maintain the fundamental pillars of their social investment: health and education along the lines of what is stated in the first point.
- The amounts established for the UBI also in the same vein as the first point must be with regard to the at-risk-of-poverty threshold.³⁴
- The model guarantees that no household below a certain position in the income distribution ladder will ever have a lower net income than the "ex-ante" situation. 35
- The model guarantees that once the UBI is implemented, each household will obtain a net income "ex-post" that places it below the at-risk-ofpoverty threshold that corresponds to it in accordance with its composition.³⁶
- It is envisaged that beneficiaries shall be required to reside for at least three years before receiving the UBI.³⁷

What UBI is received and how is it received?

We have described four scenarios to determine how much is to be transferred. In the four tables that appear below, corresponding to scenarios 1, 2, 3 and 4, we provide the results of seven types of households – by far the most representative of the microdata we have used – by which the quantities detailed are the transfers perceived by the household as a whole and by each of its individual members. Household type 1A is a single person, 1A+1UC is a single parent with a single underage child, 2A is an adult couple, 2A+1UC is a couple with a single underage child, 2A+2UC is a couple with two underage children, 3A is a household where three adults live together, and finally 3A+1UC is a household with three adults and a single underage child. In the first three cases, the at-risk-of-poverty threshold of the EU in the 26 states included in the study has been used as a reference, which, as indicated in Table 1, is €10,846 per annum. However, in scenario 4, the reference is the severe at-risk-of-poverty threshold, which according to Table 1 is €6,857 per annum.

³⁴ The tax receipts necessary for the financing of the UBI must also take into account the previous receipts obtained through income tax in the "ex-ante" situation, as will be justified later.

³⁵ As will likewise be detailed, there are four scenarios established in this study with differing amounts of UBI, all of which take the threshold of risk of poverty or severe poverty of each state as a reference.

³⁶ This guarantee is a compensation clause, meant to limit the possible losing out of households in the "expost" situation. As will be seen later, the proposal in this study is to place this limit at the 80th percentile of equivalent Gross Income for each state. In other words, no person below the wealthiest 20% would lose out with our UBI financing proposal.

³⁷ This guarantee is a poverty elimination clause: no household should be relatively poor in the "ex-post" situation.

Scenario 1. Basic household income, individualized, applying the at-risk-of-poverty threshold characteristic of the household.

As mentioned above, of the four scenarios described, we believe this is the simplest and easiest to explain to anyone interested in the UBI proposal, although the other three can also be well justified for other reasons that we will attempt to put forward.

The amount transferred is determined depending on the characteristics of the household. Consequently, in scenario 1, the at-risk-of-poverty threshold multiplied by the modified OECD equivalence scale is the amount received by the household. However, since the transfer must be individual, this amount is divided by the number of people in the household, which provides the individual transfer. In addition, in the case of underage children, the transfer applies to them is assigned to the adults who are considered parents or legal guardians. Household 3A+1UC represents a special case in this regard, which is why the transfers to adults are different. In the first two, where they are considered parents or legal guardians, the transfer of the minor is shared, while the third adult, receives the transfer proportional to the number of people in the household.

Scenario 1

Quantitats percebudes	1A	1A+1FM	2A	2A+1FM	2A+2FM	3A	3A+1FM
Liar	10.286,00	13.371,80	15.429,00	18.514,80	21.600,60	20.572,00	23.657,80
Per cada persona de la liar	10.286,00	6.685,90	7.714,50	6.171,60	5.400,15	6.857,33	5.914,45
Per cada persona més grans de 18 anys de la liar	10.286,00	13.371,80	7.714,50	9.257,40	10.800,30	6.857,33	8.871,68
							5.914,45

A = Adult (more than 18 years old), FM = Child (less than 14 years old)

Scenario 2. Individual Basic Income

In scenario 2, the transfer to the household is determined according to the members. For single-person and single-parent households, the transfer to adults is 95% of the single-person at-risk-of-poverty threshold. For other households, it is 75%, and for minors, it is 30%. Once the transfer has been determined according to the members, the allocation to the household is obtained, and finally done individually following the same criteria indicated in the previous footnote. The percentage figures used for the design of the

Universal Basic Income Pilot Plan in Catalonia,³⁸ expected to be launched at the end of 2023, are 95%, 75% and 30%. We believed these to be meaningful since they will relate to those of this major pilot, which has been the product of many discussions among specialists. But once again, it must be said that these criteria may obviously be changed or revised:

Adults = 95% of the at-risk-of-poverty threshold for single-parent or single-person households.

Adults = 75% of the at-risk-of-poverty threshold for other households.

Minors = 30% of the at-risk-of-poverty threshold.

Scenario 2

Quantitats percebudes	1A	1A+1FM	2A	2A+1FM	2A+2FM	3A	3A+1FM
Liar	9.771,00	12.856,00	15.428,00	18.513,00	21.598,00	23.142,00	26.227,00
Per cada persona de la liar	9.771,00	6.428,00	7.714,00	6.171,60	5.399,50	7.714,00	6.556,75
Per cada persona més grans de 18 anys de la liar	9.771,00	12.856,00	7.714,00	9.256,50	10.799,00	7.714,00	9.835,13
							6.556,75

A = Adult (more than 18 years old), FM = Child (less than 14 years old)

Scenario 3. Individual Basic Income

Scenario 3 features a minor variation on scenario 2, which reduces the calculation of adults in households that are not single-person or single-parent households from 75% to 70%. The previous note also serves as a description of this third possibility:

Adults = 95% of the at-risk-of-poverty threshold for single-parent or single-person households.

Adults = 70% of the at-risk-of-poverty threshold or other households.

Minors = 30% of the at-risk-of-poverty threshold.

Scenario 3

Quantitats percebudes	1A	1A+1FM	2A	2A+1FM	2A+2FM	3A	3A+1FM
Liar	9.771,00	12.856,00	14.400,00	17.485,00	20.570,00	21.600,00	24.685,00
Per cada persona de la liar	9.771,00	6.428,00	7.200,00	5.828,33	5.142,50	7.200,00	6.171,25
Per cada persona més grans de 18 anys de la liar	9.771,00	12.856,00	7.200,00	8.742,50	10.285,00	7.200,00	9.256,88
							6.171,25

A = Adult (more than 18 years old), FM = Child (less than 14 years old)

³⁸This is a controversial point from an ideological, legal and political point of view – in the sense of the subjectivity involved in the definition of residence within each state – and also from the point of view of its quantification, since it is not possible to ascertain the incidence of income distribution of immigration, despite the fact that EUROSTAT publishes various immigration statistics. Obviously, future proposals may be made where the residence requirement is for a shorter period of time.

Scenario 4. Individual Basic Income

Finally, scenario 4 allots each adult the individual at-risk-of-severe-poverty threshold and each underage child 50% of that. The transfer received by the household is obtained by adding up the amounts for each individual member, and is then individualized following the same criteria as described for the other scenarios:

Adults = at-risk-of-severe-poverty threshold.

Minors = 50% of the severe at-risk-of-poverty threshold.

Scenario 4

Quantitats percebudes	1A	1A+1FM	2A	2A+1FM	2A+2FM	3A	3A+1FM
Liar	6.857,00	10.285,00	13.714,00	17.142,00	20.570,00	20.571,00	23.999,00
Per cada persona de la liar	6.857,00	5.142,50	6.857,00	5.714,00	5.142,50	6.857,00	5.999,75
Per cada persona més grans de 18 anys de la liar	6.857,00	10.285,00	6.857,00	8.571,00	10.285,00	6.857,00	8.999,63
							5.999,75

A = Adult (more than 18 years old), FM = Child (less than 14 years old)

It is very important to emphasize that in none of the scenarios described is there one single person, except obviously in the cases of single-person and single-parent households with minor children – be it man, woman, head of family, etc. – who perceives the entire transfer assigned to the household. This is to be distributed equally among all household members, in compliance with characteristic 1 of the UBI.

Operation of the financing model³⁹

A series of definitions of each of the concepts is useful in order to be able to describe how the financing model we propose works.

IGross = Gross personal income (result of distribution/assignation)

INet_a = Net personal income ex-ante (result of distribution/assignation)

Transf = Transfers to other households (result of distribution/assignation in HY130G)

SSC = Social security contributions (result of distribution/assignation in HY140G)

ITax_a = Income tax ex-ante (result of distribution/assignation in HY140G)

WT_a = Wealth tax ex-ante (result of distribution/assignation in HY120G)

³⁹ For further information, see the Government of Catalonia's MINISTRY OF THE PRESIDENCY, Universal Basic Income Pilot Project.

Following this model, the net personal income *ex-ante* is calculated based on the gross personal income, minus transfers to other households, social contributions, income tax *ex-ante* and wealth tax *ex-ante*.

$$INet_a = IGross - Transf - SSC - ITax_a - WT_a$$

AIG = Transfer of IG according to scenariosSaving = Amount saved in benefits that the AIG absorbs. Characteristic 2 of the IG

Benefits ex-ante =

HY060G + HY070G + PY100G + PY110G + PY120G + PY130G + PY140G0

Savings = minimum (QRB Benefits ex-ante)

ITax_p = income tax ex-post

ITax p = Rate over/(INet - Savings)

Income tax rate applicable to personal Gross Income - Savings

Brackets	Marginal rates
0 euro to 3,000 euros	25.00%
3,000 euros to 12,000 euros	44.00%
12,000 euros to 25,000 euros	46.00%
25,000 euros to 50,000 euros	48.00%
50,000 euros to 100,000 euros	50.00%
100,000 euros to 200,000 euros	52.00%
200,000 euros to 300,000 euros	56.00%

300,000 euros and on

Deficit ITax_p = Lack of funding to guarantee characteristic 5 of the BI

INet_p - Personal income net ex-post

$$INet_p = IGross - (Tranf + CSS) + QRB - (Saving + ITax p)$$

GainH = Gain in household LossH = Loss in household GH = Gaining household LH = Losing household

$$\begin{array}{ll} \textit{members} & \textit{members} \\ qH &=& \sum_{i \ = \ 1} & \textit{INet}_p_i - \sum_{i \ = \ 1} & \textit{Inet}_a_i \\ \\ \textit{if } qH \geq 0 \rightarrow \textit{GainH} = qH, \ GH = 1, \ \textit{LossH} = 0, \ \textit{LH} = 0 \\ \textit{if } qH < 0 \rightarrow \textit{LossH} = qH, \ \textit{LH} = 1, \ \textit{GainH} = 0, \ \textit{GH} = 0 \end{array}$$

GainH = Personal gain LossH = Personal loss GP = Person gaining LP = Person losing

$$qP = INet_p - INet_a$$
 if $qP \ge 0 \rightarrow GainP = qP$, $GP = 1$, $LossP = 0$, $LP = 0$ if $qP < 0 \rightarrow LossP = qp$, $LP = 1$, $GainP = 0$, $GP = 0$

Cost of compensation = Cost of compensation loss of households. LossH – situated below the 80th percentile of the equivalent IGross.

Cost of eliminating poverty = Cost of setting resulting net ex-post Income of all households above the poverty threshold.

$$\begin{array}{ll} \textit{members} \\ \textit{qpoverty} = & \sum_{i \ = \ 1}^{} & \textit{Inet_p$_{\tiny i}$- (at-risk-of-poverty threshold x OECD)} \\ & \textit{members} \\ \textit{if qpoverty} < 0 \rightarrow & \sum_{i \ = \ 1}^{} & \textit{Inet_p$_{\tiny i}$= (at-risk-of-poverty threshold x OECD)} \\ & \textit{Cost of eliminating poverty} = \textit{qpoverty} \end{array}$$

Unfunded cost = Cost resulting from the deficit generated by ex-post income tax, household compensation, and the elimination of poverty of households.

Unfunded cost = INet_p + compensation cost + cost of eliminating poverty

4 Results

Table 6 shows the results obtained in the four scenarios.

The first part of the table includes a snapshot of the ex-ante situation: population analysed, levels of income, including their different components, poverty indicators, situations of exclusion and degree of inequality.

There is no need to dwell on this since it has already been dealt with sufficiently in previous sections, but it is important to emphasize and insist on certain results.

In 2020, in the midst of the 21st century, with over 190 million households, the EU continues to have:

- · More than 18% at risk of poverty.
- · Almost 7% at risk of severe poverty.
- Almost 6% of these households show penury, considered in social statistics as severe material deprivation.

In individual terms, for an analysed population of over 436 million:

- Over 18% of minors and more than 16% of adults are at risk of poverty.
- Over 6.5% of minors and almost 6% of adults are at risk of severe poverty.
- Over 8% of the population recorded as available for work state that they are unemployed, or if they do work, that they are underemployed.
- Almost 21% the AROPE Rate are At Risk Of Poverty and social Exclusion.

As for inequality, Gross Income is quite remarkable – Gini = 0.4236 – but inequality continues to persist in terms of Net Income – Gini = 0.3756 – indicating that Taxation on Income and on Wealth – much lower and even non-existent in some of the states analysed – do not even come near the expected redistributive effects.⁴⁰

⁴⁰ All these items are used subsequently in Table 6, which shows the results of the four scenarios

The above makes it very clear what the introduction of a UBI at European level is to solve.

Table 6: Results of the simulated scenarios

Details of the population				
	Total			
Households (sample)	228.093			
Households	190.626.266			
Persons (sample)	527.452			
Under 18	77.487.958			
Over 18	358.546.186			
18 to 59	320.645.450			
Persons	436.034.143			

Details of income	
Eamings from labour (incl. Unemployment benefit)	5.389.310,38
Income from economic activities	671.429,68
Other income (incl. grants and subsidies)	615.730,59
Pensions (retirement, survivors, disability)	1.722.345,86
Gross Income	8.398.816,52
Transfers to other households	63.788,67
Social contributions	845.803,09
Income tax	1.406.112,08
Wealth tax	45.714,30
Ex-ante Net Income	6.037.398,38

Details of poverty, social exclusion and inequality

Risk of poverty (Households)	34.956.553	(18,34%)
Risk of severe poverty (Households)	12.820.755	(6,73%)
Severe material deprivation (Households)	11.100.336	(5,82%)
Risk of poverty (under 18 years old)	14.080.047	(18,17%)
Risk of severe poverty (under 18 years old)	5.094.428	(6,57%)
Risk of poverty (18 years old and over)	57.501.684	(16,04%)
Risk of severe poverty (18 years old and over)	20.956.254	(5,84%)
Under- or unemployed (all)	25.865.626	(8,07%)
Risk of poverty and social exclusion (all)	90.469.417	(20,75%)
Gini Index Gross Income	0,4236	
Gini Index Net income ex-ante	0,3756	
Suits Index Income Tax ex-post vs. Net Income ex-ante	0,2114	
Redistributive effect ex-ante	0,0481	

All amounts are in million euros.

- **Scenario 1.** Basic income in the individual household (applying the poverty risk threshold characteristic of the household).
- **Scenario 2.** Basic Income: Adults = 95% / 75% (single-parent, single-person/Rest), Minors = 30% (% above the single-person poverty risk threshold).
- **Scenario 3.** Basic Income: Adults = 95% / 70% (single-parent, single-person/Rest), Minors = 30% (% above the single-person poverty risk threshold).
- **Scenario 4.** Basic Income: Adults (one-person threshold at risk of severe poverty), Minors (50% one-person threshold at risk of severe poverty).

	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Basic Income	3.230.454,71	3.262.906,91	3.113.482,63	2.811.533,06
Savings	1.193.776,21	1.192.069,93	1.158.722,83	1.041.952,35
Impost s/ Renda ex-post	3.184.932,99	3.185.786,80	3.199.823,30	3.248.779,19
Resulting average tax rate	44,20%	44,21%	44,20%	44,16%
Average required tax rate	47,78%	48,25%	46,42%	43,17%
Deficit(-)/Surplus(+) Ex-post income tax to finance the Bi	-257.857,59	-291.162,26	-161.048,58	73.086,40
Ex-post Net Income	6.340.970,26	6.374.274,94	6.244.161,26	6.010.026,28
% Winners (Households)	63,22%	62,96%	60,10%	49,65%
% Losers (Households)	36,78%	37,04%	39,90%	50,35%
% Winners (over 18)	60,68%	61,60%	58,98%	52,77%
% Losers (over 18)	39,32%	38,40%	41,02%	47,23%
Compensation cost (up to the 80th percentile of equivalent Gross Income)	-112.836,67	-113.647,38	-129.802,45	-184.952,21
Cost of eliminating poverty	-7.952,69	-13.755,20	-15.581,97	-4.974,13
Unfunded cost (Tax deficit vs. Income ex-post + compensation cost + poverty elimination cost)	-378.646,94	-418.564,85	-306.433,00	-116.839,95
% vs. EU GDP (excluding Lithuania)	-2,71%	-3,00%	-2,19%	-0,84%
Gini Index Net Income ex-post	0,3000	0,2993	0,2998	0,3088
Suits index Expost income tax vs. Expost Net income	0,2499	0,2485	0,2452	0,2200
Suits Index Basic Income vs. Ex-post Net Income	-0,1596	-0,1571	-0,1606	-0,1576
Redistributive effect ex-post	0,1237	0,1244	0,1238	0,1148

Now that the data have been detailed, each scenario needs to be analysed specifically to provide insight into each option.

Scenario 1

- · There are no longer any households at risk of poverty.
- All households below the 80th percentile of equivalent Gross Income for each of the states maintain or improve their position compared to the "ex-ante" situation.
- 63.2% of households gain and 36.8% of households lose out.
- 60.7% of adults gain and 39.3% of adults lose out.
- Deficit of €257,857.59 million in "ex-post" collection.
- 12.4% redistributive effect compared to the 4.8% attained in the "ex-ante" situation.
- The cost of the compensation and elimination of poverty clauses comes to
 €120 billion.
- The total unfunded cost "ex-post" collection deficit + compensation + poverty elimination amounts to 2.7% of the EU GDP excluding Lithuania.

Scenario 2

- · There are no longer any households at risk of poverty.
- All households below the 80th percentile of equivalent Gross Income for each of the states maintain or improve their position, compared to the "ex-ante" situation.
- 63% of households gain and 37% of households lose out.
- 52.8% of adults gain and 47.3% of adults lose out.
- Deficit of €289,455.98 million in ex-post collection.
- 12.4% redistributive effect compared to the 4.8% attained in the ex-ante situation.

- The cost of the compensation and elimination of poverty clauses in this case is €127 billion euros.
- The total unfunded cost ex-post collection deficit + compensation + poverty elimination – amounts to almost 3% of the EU GDP – excluding Lithuania.

Scenario 3

- · There are no longer any households at risk of poverty.
- All households below the 80th percentile of equivalent Gross Income for each of the states maintain or improve their position, compared to the "ex-ante" situation.
- 60.1% of households gain and 39.9% of households lose out.
- 59% of adults gain and 41% of adults lose out.
- Deficit of €125,995.2 million in "ex-post" collection.
- 12.4% redistributive effect compared to the 4.8% attained in the "ex-ante" situation.
- The cost of the compensation and poverty elimination clauses in this case is €145 billion.
- The total unfunded cost "ex-post" collection deficit + compensation + poverty elimination amounts to almost 2% excluding Lithuania.

Scenario 4

- There are no longer any households at risk of poverty.⁴¹
- All households below the 80th percentile of equivalent Gross Income for each of the states maintain or improve their position, compared to the "ex-ante" situation.
- 49.7% of households gain and 50.3% of households lose out.
- 61.6% of adults gain and 38.4% of adults lose out.
- Surplus of almost €225 billion in "ex-post" collection.
- 11.4% redistributive effect compared to the 4.8% attained in the "ex-ante" situation.
- The cost of the compensation and poverty elimination clauses in this case is €190 billion
- In this case, there is a surplus "ex-post" collection surplus + compensation + poverty elimination – which amounts to almost 0.25% of the EU GDP – excluding Lithuania.

It should be borne in mind, however, that the Gini coefficient has in this case been calculated without distinguishing between the states analysed, unlike the previous results that take the particular situation within each state as reference. The variability observed between states and already described above, may introduce some nuance into this aggregate result.

Some other data of interest are in all four scenarios, the Gini index is between 0.29 and 0.31.⁴² This indicates that according to the proposed model, all four show a significantly more equal redistribution of income than that in the initial situation, which was 0.37.

How to obtain the additional funding required?

The estimates of the four UBI scenarios and their funding through a progressive Income Tax rate result in additional financing needs that are not covered by the new Income Tax rate, taking into account that the new Income Tax

We have added two additional conditions that increase the cost. ex-post must cover the payment of the UBI, as well as the former collection – ex-ante – of Personal Income Tax and Wealth Tax (WT). In addition, we have added two additional conditions that increase the cost: a) no household below the 80th percentile of the equivalent income distribution in each state

must lose out; and b) no household must be left with a final income below the at-risk-of-poverty threshold.

The sum of the three costs not funded by the new Income Tax shows the need for funding beyond Income Tax. Obviously, this need might also have been covered by a higher personal income tax rate, but that would have exceeded average rates above 50% and further penalized work and business activities.

The final requirements shown in Table 6 above range from €116,840 million to €418,565 million, depending on the scenario, equivalent to between 0.84% and 3% of the EU-26 GDP.

How to fund these requirements?⁴³ First, it is necessary to consider certain elements detailed in several studies by authors Arcarons, Raventós and Torrens on savings that arise when a UBI is established.⁴⁴ We consider that the prison population of each state will not receive the UBI since their basic needs are already covered by the penitentiary system, besides other consid-

⁴² Although in Scenario 4 the amount of UBI refers to the at-severe-risk-of-poverty threshold, the poverty elimination clause is calculated based on the at-risk-of-poverty threshold.

⁴³ However, the comment on the Gini coefficient in note 42 should also be borne in mind

Other savings also considered in ARCARONS, RAVENTOS; TORRENS, Renta básica incondicional. Una propuesta de financiación racional y justa, such as the agreement to finance the personnel of the Catholic Church or personnel who do not work but are paid to be on stand-by – such as military or police personnel in the reserve – have not been considered, since each state has specific characteristics that would require an ad-hoc study.

erations in this regard that may be made concerning the penitentiary population. Applying each mode of UBI per adult in each state for the total prison population – 490,337 inmates – according to 2019 EUROSTAT data⁴⁵ gives us annual savings of between $\le 3,150$ million and $\le 4,489$ million.

Secondly, and still regarding the aforementioned publications,⁴⁶ we demonstrate savings of 50% in social protection administration expenses, according to the European System of integrated Social Protection Statistics (ESSPROS) sectorialised expenditure statistics, and also according to the 2019 EURO-STAT data,⁴⁷ which altogether would provide savings of €59,904 million per annum.

Discounting these two savings from the requirements calculated initially, the final amounts to cover are as follows:

Table 7. Financing requirements

	Scenario				
Items (in million euros)	1	2	3	4	
External financing requiremens after income tax ex-post	-378.646,90	-418.564,90	-306.433,00	-116.839,90	
% GDP	-2,71 %	-3,00 %	-2,19 %	-0,84 %	
Savings on inmates	4.725,60	4.489,30	4.489,30	3.150,40	
Savings on administrative expedenture	59.814,40	59.814,40	59.814,40	59.814,40	
Pending funding	-314.105,90	-354.261,10	-242.129,30	-53.875,10	
% GDP	-2,25 %	-2,54 %	-1,73 %	-0,39 %	

Source: EUROSTAT, prepared by the authors

And once again, the question arises: how should these final requirements be covered after these additional savings? As we state at the beginning of this report, we propose two fiscal sources for funding, in addition to the Income Tax estimated above:

- a) Indirect environmental taxes levied on consumption considered directly or indirectly polluting.
- b)Direct tax on the net financial and non-financial wealth of households, which would replace the WT as considered by the EU-SILC.

The validity of both sources is fully justified since they tackle two of the most serious problems of the current socio-economic model in developed countries, such as the need to tax greenhouse gas (GHG) emissions and the growing concentration of wealth in the wealthiest cohorts of the population, which other existing direct taxes – Income Tax, property taxes, or inheritance taxes among the most important – are unable to curb.

⁴⁵ ARCARONS, RAVENTOS, TORRENS, Renta básica incondicional. Una propuesta de financiación racional y justa.

⁴⁶ EUROSTAT publishes statistics on prisoners by age and sex, and also the number and proportion by sex and the corresponding age groups. This information may be consulted at .

⁴⁷ Ibic

Environmental taxation is a Pigouvian tax – it serves to reduce consumption and favour substitute, environmentally-friendly consumption – while wealth taxation is a redistributive tax that seeks to capture wealth gains protected from the rest of the tax system, such as the implicit profits that are only usually paid when purchase and sale transactions are made and the profits surface. 48

Table 8 - Environmental taxes and receipts

Member State	Receipts E, P, RS, T (million euros)	Emissions (million t CO ₂ equivalent)	t CO2 per inhabitant	Receipts euro/t CO ₂
Germany	61.119,00	702,6	8,52	86,99
Austria	9.058,30	72,36	8,25	125,18
Belgium	12.627,60	104,41	9,03	120,94
Bulgaria	1.839,10	43,31	6,2	42,46
Croatia	1.921,60	19,12	4,62	100,51
Denmark	10.221,30	31,12	5,39	328,46
Slovakia	2.246,00	35,99	6,6	62,41
Slovenia	1.614,80	15,37	7,38	105,1
Spain	22.018,00	259,31	5,58	84,91
Estonia	889,6	18,5	14,19	48,08
Finland	6.730,00	43,41	7,81	155,02
France	56.327,00	314,74	4,81	178,97
Greece	7.086,00	65,57	5,89	108,07
Hungary	3.307,90	53,18	5,51	62,2
Ireland	5.027,50	36,55	7,54	137,56
Italy	58.304,00	331,56	5,6	175,85
Luxembourg	1.094,40	9,74	16,31	112,36
Latvia	899,7	8,38	4,38	107,37
Malta	345,7	1,04	2,41	331,23
Netherlands	27.570,00	156,41	9,13	176,26
Poland	13.545,50	317,65	8,35	42,64
Portugal	5.418,10	48,47	4,73	111,78
Romania	4.731,70	78,63	4,04	60,18
Sweden	9.779,30	44,75	4,45	218,54
Czechia	4.594,90	105,69	9,94	43,47
Cyprus	583,7	7,41	6,19	78,74
EU-26	328.900,60	2.925,30	6,6	112,43

Source: EUROSTAT, EDGAR-JRC, prepared by the authors

⁴⁸ EUROSTAT publishes these data on expenditure, detailing total expenditure for management and administration. This information may be consulted at www.ec.europa.eu/eurostat.

What is the tax base on which to apply these two taxes? For environmental taxes, we will simplify it in terms of GHG emissions - estimated in ${\rm CO_2}$ equivalent tonnes ⁴⁹

With the environmental tax data from each country, we have calculated the annual receipts from environmental taxes for CO_2 emissions, and we estimate that these would be between \in 42 and \in 331 per tonne of CO_2 emitted. For example, we see in Table 8 that Denmark is the state that pays the most. For wealth taxes, we have carried out a similar exercise. In this case, the tax base is the estimate of the assets of the wealthiest 2% of the population, i.e. the 98th percentile. For the have established two systems to calculate the possible tax base for wealth. In the first model with capital tax data for each country, we have calculated how much they pay in these types of taxes — discounting environmental taxes — as seen in Table 9.

⁴⁹The database used to estimate taxes paid ex-ante is that of EUROSTAT – Main national accounts tax aggregates (gov_10a_taxag), which reports, tax by tax and state by state, on the annual receipts – in our estimate, that of 2019. In this database, taxes are classified by economic function – on income, capital, work or consumption – and by type – alcohol, tobacco, transport, energy, pollution & resources, and property. As environmental taxes, we have made a query for each state of those corresponding to types T– transport, E – energy, and P/RS – pollution & resources. For taxes on wealth, we have made a queryon those whose economic function was KS – taxes on the stock of wealth, but discounting the environmental taxes affected by the same function so as not to count twice. KS includes taxes on wealth, on inheritances, asset transactions etc.

Sestimated according to the European Commission Join Research Center EDGAR database which estimates global emissions annually state by state. The EDGAR data omit international shipping and flight emissions originating from or arriving in EU and count them as two states – a source of funding that we have not considered, but which could be added with some calculations on passengers and volumes of goods to and from airports and ports. For more information: www.edgari.jrc.ee.europa.eu.

⁵¹ Using the World Inequality Lab's World Inequality Database (WID), which also estimates year-on-year household and nonprofit wealth on a state-by-state basis. To calculate the total wealth, the value of the variable ahweal992i – average wealth per adult – is multiplied by the variable npopul992i – adult population – by the total population – p0p100 indicator of both variables – for each state. For further information, see www.wid. world.

Table 9 - Receipts on wealth and implicit taxation

Member State	Receipts on wealth KS- (E,P/RS,T) (in million euros)	Total Net Wealth (in million euros)	% Implicit taxation on wealth
Germany	43.802,0	11.515.518,9	0,38%
Austria	3.916,1	1.360.144,2	0,29%
Belgium	19.044,2	2.110.711,7	0,90%
Bulgaria	448,7	143.921,8	0,31%
Croatia	636,6	129.614,9	0,49%
Denmark	8.939,0	1.181.407,7	0,76%
Slovakia	698,2	236.366,2	0,30%
Slovenia	490,9	119.865,0	0,41%
Spain	38.155,0	6.500.243,9	0,59%
Estonia	121,4	76.019,3	0,16%
Finland	3.748,0	658.064,2	0,57%
France	85.846,0	12.364.408,9	0,69%
Greece	6.814,0	476.334,2	1,43%
Hungary	2.152,1	514.063,6	0,42%
Ireland	4.190,2	825.159,9	0,51%
Italy	71.380,0	8.830.889,7	0,81%
Luxembourg	45,0	109.039,9	0,04%
Latvia	319,0	91.228,1	0,35%
Malta	194,8	31.113,8	0,63%
Netherlands	13.412,0	3.466.960,2	0,39%
Poland	9.327,3	854.920,3	1,09%
Portugal	5.240,2	1.077.007,9	0,49%
Romania	1.701,9	588.981,8	0,29%
Sweden	5.475,3	1.698.281,2	0,32%
Czechia	1.333,8	539.570,1	0,25%
Cyprus	280,0	61.588,2	0,45%
EU-26	327.711,5	55.561.425,5	0,59%

Source: EUROSTAT, EDGAR-JRC, prepared by the authors

The second method of calculation estimates the tax base as the excess asset accrual of the wealthiest 2% of the population – the 98th percentile – during the period 2010-2019 against the amount in 2010, using data from the WID. That is, the amount that would have to be deducted from the wealth of the 98th percentile so that their share of wealth over total households in each country – p98 / p0p100 – is at most the same in 2019 as that which they had in 2010. The results are to be found in Table 10.

Table 10 - Results on the 98th percentile of wealth

Germany 2.976.337,8 34,7% 4.090.530,4 35,5% 0,86% Austria 355.037,8 32,3% 495.162,9 36,4% 4,09% Belgium 469.452,9 26,0% 507.488,4 24,0% -1,90% Bulgaria 42.365,7 30,4% 47.148,2 32,8% 2,38% Croatia 28.969,2 29,7% 38.384,8 29,6% -0,10% Denmark 233.074,0 26,4% 315.141,6 26,7% 0,23% Slovakia 35.727,0 18,8% 57.574,6 24,4% 5,59% Slovenia 22.010,6 18,4% 36.593,0 30,5% 12,16% Spain 143.445,1 25,9% 168.044,7 25,5% -0,39% Estonia 18.624,6 39,4% 31.865,4 41,9% 2,53% Finland 3.334.270,2 31,9% 4.110.755,4 33,3% 1,40% France 116.185,1 21,7% 150.249,7 31,5% 9,84% Greece	Member State	Wealth p98 2010 (in million euros)	% p98 on total 2010	Wealth p98 2019 (in million euros)	% p98 on total 2019	Variation of p98 quota 2010-2019
Belgium 469.452,9 26,0% 507.488,4 24,0% -1,90% Bulgaria 42.365,7 30,4% 47.148,2 32,8% 2,38% Croatia 28.969,2 29,7% 38.384,8 29,6% -0,10% Denmark 233.074,0 26,4% 315.141,6 26,7% 0,23% Slovakia 35.727,0 18,8% 57.574,6 24,4% 5,59% Slovenia 22.010,6 18,4% 36.593,0 30,5% 12,16% Spain 143.445,1 25,9% 168.044,7 25,5% -0,39% Estonia 18.624,6 39,4% 31.865,4 41,9% 2,53% Finland 3.334.270,2 31,9% 4.110.755,4 33,3% 1,40% France 116.185,1 21,7% 150.249,7 31,5% 9,84% Greece 1.992.051,7 30,2% 2.075.522,6 31,9% 1,78% Hungary 131.346,2 33,2% 216.820,5 42,2% 8,96% Ireland	Germany	2.976.337,8	34,7%	4.090.530,4	35,5%	0,86%
Bulgaria 42.365,7 30,4% 47.148,2 32,8% 2,38% Croatia 28.969,2 29,7% 38.384,8 29,6% -0,10% Denmark 233.074,0 26,4% 315.141,6 26,7% 0,23% Slovakia 35.727,0 18,8% 57.574,6 24,4% 5,59% Slovenia 22.010,6 18,4% 36.593,0 30,5% 12,16% Spain 143.445,1 25,9% 168.044,7 25,5% -0,39% Estonia 18.624,6 39,4% 31.865,4 41,9% 2,53% Finland 3.334.270,2 31,9% 4.110.755,4 33,3% 1,40% France 116.185,1 21,7% 150.249,7 31,5% 9,84% Greece 1.992.051,7 30,2% 2.075.522,6 31,9% 1,78% Hungary 131.346,2 33,2% 216.820,5 42,2% 8,96% Ireland 231.483,1 34,5% 273.756,7 33,2% -1,33% Italy	Austria	355.037,8	32,3%	495.162,9	36,4%	4,09%
Croatia 28.969,2 29,7% 38.384,8 29,6% -0,10% Denmark 233.074,0 26,4% 315.141,6 26,7% 0,23% Slovakia 35.727,0 18,8% 57.574,6 24,4% 5,59% Slovenia 22.010,6 18,4% 36.593,0 30,5% 12,16% Spain 143.445,1 25,9% 168.044,7 25,5% -0,39% Estonia 18.624,6 39,4% 31.865,4 41,9% 2,53% Finland 3.334.270,2 31,9% 4.110.755,4 33,3% 1,40% France 116.185,1 21,7% 150.249,7 31,5% 9,84% Greece 1.992.051,7 30,2% 2.075.522,6 31,9% 1,78% Hungary 131.346,2 33,2% 216.820,5 42,2% 8,96% Ireland 231.483,1 34,5% 273.756,7 33,2% -1,33% Italy 2.866.972,1 29,5% 2.620.507,1 29,7% 0,22% Luxembourg	Belgium	469.452,9	26,0%	507.488,4	24,0%	-1,90%
Denmark 233.074,0 26,4% 315.141,6 26,7% 0,23% Slovakia 35.727,0 18,8% 57.574,6 24,4% 5,59% Slovenia 22.010,6 18,4% 36.593,0 30,5% 12,16% Spain 143.445,1 25,9% 168.044,7 25,5% -0,39% Estonia 18.624,6 39,4% 31.865,4 41,9% 2,53% Finland 3.334.270,2 31,9% 4.110.755,4 33,3% 1,40% France 116.185,1 21,7% 150.249,7 31,5% 9,84% Greece 1.992.051,7 30,2% 2.075.522,6 31,9% 1,78% Hungary 131.346,2 33,2% 216.820,5 42,2% 8,96% Ireland 231.483,1 34,5% 273.756,7 33,2% -1,33% Italy 2.866.972,1 29,5% 2.620.507,1 29,7% 0,22% Luxembourg 17.050,7 34,8% 38.382,3 35,2% 0,42% Latvia	Bulgaria	42.365,7	30,4%	47.148,2	32,8%	2,38%
Slovakia 35.727,0 18,8% 57.574,6 24,4% 5,59% Slovenia 22.010,6 18,4% 36.593,0 30,5% 12,16% Spain 143.445,1 25,9% 168.044,7 25,5% -0,39% Estonia 18.624,6 39,4% 31.865,4 41,9% 2,53% Finland 3.334.270,2 31,9% 4.110.755,4 33,3% 1,40% France 116.185,1 21,7% 150.249,7 31,5% 9,84% Greece 1.992.051,7 30,2% 2.075.52,6 31,9% 1,78% Hungary 131.346,2 33,2% 216.820,5 42,2% 8,96% Ireland 231.483,1 34,5% 273.756,7 33,2% -1,33% Italy 2.866.972,1 29,5% 2.620.507,1 29,7% 0,22% Luxembourg 17.050,7 34,8% 38.382,3 35,2% 0,42% Latvia 21.757,3 36,6% 32.732,1 35,9% -0,70% Malta	Croatia	28.969,2	29,7%	38.384,8	29,6%	-0,10%
Slovenia 22.010,6 18,4% 36.593,0 30,5% 12,16% Spain 143.445,1 25,9% 168.044,7 25,5% -0,39% Estonia 18.624,6 39,4% 31.865,4 41,9% 2,53% Finland 3.334.270,2 31,9% 4.110.755,4 33,3% 1,40% France 116.185,1 21,7% 150.249,7 31,5% 9,84% Greece 1.992.051,7 30,2% 2.075.522,6 31,9% 1,78% Hungary 131.346,2 33,2% 216.820,5 42,2% 8,96% Ireland 231.483,1 34,5% 273.756,7 33,2% -1,33% Italy 2.866.972,1 29,5% 2.620.507,1 29,7% 0,22% Luxembourg 17.050,7 34,8% 38.382,3 35,2% 0,42% Latvia 21.757,3 36,6% 32.732,1 35,9% -0,70% Malta 4.507,3 20,3% 9.173,3 29,5% 9,20% Netherlands	Denmark	233.074,0	26,4%	315.141,6	26,7%	0,23%
Spain 143.445,1 25,9% 168.044,7 25,5% -0,39% Estonia 18.624,6 39,4% 31.865,4 41,9% 2,53% Finland 3.334.270,2 31,9% 4.110.755,4 33,3% 1,40% France 116.185,1 21,7% 150.249,7 31,5% 9,84% Greece 1.992.051,7 30,2% 2.075.522,6 31,9% 1,78% Hungary 131.346,2 33,2% 216.820,5 42,2% 8,96% Ireland 231.483,1 34,5% 273.756,7 33,2% -1,33% Italy 2.866.972,1 29,5% 2.620.507,1 29,7% 0,22% Luxembourg 17.050,7 34,8% 38.382,3 35,2% 0,42% Latvia 21.757,3 36,6% 32.732,1 35,9% -0,70% Malta 4.507,3 20,3% 9.173,3 29,5% 9,20% Netherlands 595.298,3 23,7% 778.870,9 22,5% -1,26% Poland	Slovakia	35.727,0	18,8%	57.574,6	24,4%	5,59%
Estonia 18.624,6 39,4% 31.865,4 41,9% 2,53% Finland 3.334.270,2 31,9% 4.110.755,4 33,3% 1,40% France 116.185,1 21,7% 150.249,7 31,5% 9,84% Greece 1.992.051,7 30,2% 2.075.522,6 31,9% 1,78% Hungary 131.346,2 33,2% 216.820,5 42,2% 8,96% Ireland 231.483,1 34,5% 273.756,7 33,2% -1,33% Italy 2.866.972,1 29,5% 2.620.507,1 29,7% 0,22% Luxembourg 17.050,7 34,8% 38.382,3 35,2% 0,42% Latvia 21.757,3 36,6% 32.732,1 35,9% -0,70% Malta 4.507,3 20,3% 9.173,3 29,5% 9,20% Netherlands 595.298,3 23,7% 778.870,9 22,5% -1,26% Poland 180.606,2 32,5% 321.968,0 37,7% 5,17% Portugal	Slovenia	22.010,6	18,4%	36.593,0	30,5%	12,16%
Finland 3.334.270,2 31,9% 4.110.755,4 33,3% 1,40% France 116.185,1 21,7% 150.249,7 31,5% 9,84% Greece 1.992.051,7 30,2% 2.075.522,6 31,9% 1,78% Hungary 131.346,2 33,2% 216.820,5 42,2% 8,96% Ireland 231.483,1 34,5% 273.756,7 33,2% -1,33% Italy 2.866.972,1 29,5% 2.620.507,1 29,7% 0,22% Luxembourg 17.050,7 34,8% 38.382,3 35,2% 0,42% Latvia 21.757,3 36,6% 32.732,1 35,9% -0,70% Malta 4.507,3 20,3% 9.173,3 29,5% 9,20% Netherlands 595.298,3 23,7% 778.870,9 22,5% -1,26% Poland 180.606,2 32,5% 321,968,0 37,7% 5,17% Portugal 306.730,1 31,4% 361.098,2 33,5% 2,13% Romania <th>Spain</th> <th>143.445,1</th> <th>25,9%</th> <th>168.044,7</th> <th>25,5%</th> <th>-0,39%</th>	Spain	143.445,1	25,9%	168.044,7	25,5%	-0,39%
France 116.185,1 21,7% 150.249,7 31,5% 9,84% Greece 1.992.051,7 30,2% 2.075.522,6 31,9% 1,78% Hungary 131.346,2 33,2% 216.820,5 42,2% 8,96% Ireland 231.483,1 34,5% 273.756,7 33,2% -1,33% Italy 2.866.972,1 29,5% 2.620.507,1 29,7% 0,22% Luxembourg 17.050,7 34,8% 38.382,3 35,2% 0,42% Latvia 21.757,3 36,6% 32.732,1 35,9% -0,70% Malta 4.507,3 20,3% 9.173,3 29,5% 9,20% Netherlands 595.298,3 23,7% 778.870,9 22,5% -1,26% Poland 180.606,2 32,5% 321,968,0 37,7% 5,17% Portugal 306.730,1 31,8% 185.315,4 31,5% -0,34% Sweden 370.320,4 35,1% 570.403,6 33,6% -1,49% Czechia	Estonia	18.624,6	39,4%	31.865,4	41,9%	2,53%
Greece 1.992.051,7 30,2% 2.075.522,6 31,9% 1,78% Hungary 131.346,2 33,2% 216.820,5 42,2% 8,96% Ireland 231.483,1 34,5% 273.756,7 33,2% -1,33% Italy 2.866.972,1 29,5% 2.620.507,1 29,7% 0,22% Luxembourg 17.050,7 34,8% 38.382,3 35,2% 0,42% Latvia 21.757,3 36,6% 32.732,1 35,9% -0,70% Malta 4.507,3 20,3% 9.173,3 29,5% 9,20% Netherlands 595.298,3 23,7% 778.870,9 22,5% -1,26% Poland 180.606,2 32,5% 321.968,0 37,7% 5,17% Portugal 306.730,1 31,4% 361.098,2 33,5% 2,13% Romania 131.057,6 31,8% 185.315,4 31,5% -0,34% Sweden 370.320,4 35,1% 570.403,6 33,6% -1,49% Czechia	Finland	3.334.270,2	31,9%	4.110.755,4	33,3%	1,40%
Hungary 131.346,2 33,2% 216.820,5 42,2% 8,96% Ireland 231.483,1 34,5% 273.756,7 33,2% -1,33% Italy 2.866.972,1 29,5% 2.620.507,1 29,7% 0,22% Luxembourg 17.050,7 34,8% 38.382,3 35,2% 0,42% Latvia 21.757,3 36,6% 32.732,1 35,9% -0,70% Malta 4.507,3 20,3% 9.173,3 29,5% 9,20% Netherlands 595.298,3 23,7% 778.870,9 22,5% -1,26% Poland 180.606,2 32,5% 321.968,0 37,7% 5,17% Portugal 306.730,1 31,4% 361.098,2 33,5% 2,13% Romania 131.057,6 31,8% 185.315,4 31,5% -0,34% Sweden 370.320,4 35,1% 570.403,6 33,6% -1,49% Czechia 128.000,3 30,6% 178.367,2 33,1% 2,45% Cyprus	France	116.185,1	21,7%	150.249,7	31,5%	9,84%
Ireland 231.483,1 34,5% 273.756,7 33,2% -1,33% Italy 2.866.972,1 29,5% 2.620.507,1 29,7% 0,22% Luxembourg 17.050,7 34,8% 38.382,3 35,2% 0,42% Latvia 21.757,3 36,6% 32.732,1 35,9% -0,70% Malta 4.507,3 20,3% 9.173,3 29,5% 9,20% Netherlands 595.298,3 23,7% 778.870,9 22,5% -1,26% Poland 180.606,2 32,5% 321.968,0 37,7% 5,17% Portugal 306.730,1 31,4% 361.098,2 33,5% 2,13% Romania 131.057,6 31,8% 185.315,4 31,5% -0,34% Sweden 370.320,4 35,1% 570.403,6 33,6% -1,49% Czechia 128.000,3 30,6% 178.367,2 33,1% 2,45% Cyprus 15.637,5 27,7% 25.746,7 41,8% 14,14%	Greece	1.992.051,7	30,2%	2.075.522,6	31,9%	1,78%
Italy 2.866.972,1 29,5% 2.620.507,1 29,7% 0,22% Luxembourg 17.050,7 34,8% 38.382,3 35,2% 0,42% Latvia 21.757,3 36,6% 32.732,1 35,9% -0,70% Malta 4.507,3 20,3% 9.173,3 29,5% 9,20% Netherlands 595.298,3 23,7% 778.870,9 22,5% -1,26% Poland 180.606,2 32,5% 321.968,0 37,7% 5,17% Portugal 306.730,1 31,4% 361.098,2 33,5% 2,13% Romania 131.057,6 31,8% 185.315,4 31,5% -0,34% Sweden 370.320,4 35,1% 570.403,6 33,6% -1,49% Czechia 128.000,3 30,6% 178.367,2 33,1% 2,45% Cyprus 15.637,5 27,7% 25.746,7 41,8% 14,14%	Hungary	131.346,2	33,2%	216.820,5	42,2%	8,96%
Luxembourg 17.050,7 34,8% 38.382,3 35,2% 0,42% Latvia 21.757,3 36,6% 32.732,1 35,9% -0,70% Malta 4.507,3 20,3% 9.173,3 29,5% 9,20% Netherlands 595.298,3 23,7% 778.870,9 22,5% -1,26% Poland 180.606,2 32,5% 321.968,0 37,7% 5,17% Portugal 306.730,1 31,4% 361.098,2 33,5% 2,13% Romania 131.057,6 31,8% 185.315,4 31,5% -0,34% Sweden 370.320,4 35,1% 570.403,6 33,6% -1,49% Czechia 128.000,3 30,6% 178.367,2 33,1% 2,45% Cyprus 15.637,5 27,7% 25.746,7 41,8% 14,14%	Ireland	231.483,1	34,5%	273.756,7	33,2%	-1,33%
Latvia 21.757,3 36,6% 32.732,1 35,9% -0,70% Malta 4.507,3 20,3% 9.173,3 29,5% 9,20% Netherlands 595.298,3 23,7% 778.870,9 22,5% -1,26% Poland 180.606,2 32,5% 321.968,0 37,7% 5,17% Portugal 306.730,1 31,4% 361.098,2 33,5% 2,13% Romania 131.057,6 31,8% 185.315,4 31,5% -0,34% Sweden 370.320,4 35,1% 570.403,6 33,6% -1,49% Czechia 128.000,3 30,6% 178.367,2 33,1% 2,45% Cyprus 15.637,5 27,7% 25.746,7 41,8% 14,14%	Italy	2.866.972,1	29,5%	2.620.507,1	29,7%	0,22%
Malta 4.507,3 20,3% 9.173,3 29,5% 9,20% Netherlands 595.298,3 23,7% 778.870,9 22,5% -1,26% Poland 180.606,2 32,5% 321.968,0 37,7% 5,17% Portugal 306.730,1 31,4% 361.098,2 33,5% 2,13% Romania 131.057,6 31,8% 185.315,4 31,5% -0,34% Sweden 370.320,4 35,1% 570.403,6 33,6% -1,49% Czechia 128.000,3 30,6% 178.367,2 33,1% 2,45% Cyprus 15.637,5 27,7% 25.746,7 41,8% 14,14%	Luxembourg	17.050,7	34,8%	38.382,3	35,2%	0,42%
Netherlands 595.298,3 23,7% 778.870,9 22,5% -1,26% Poland 180.606,2 32,5% 321.968,0 37,7% 5,17% Portugal 306.730,1 31,4% 361.098,2 33,5% 2,13% Romania 131.057,6 31,8% 185.315,4 31,5% -0,34% Sweden 370.320,4 35,1% 570.403,6 33,6% -1,49% Czechia 128.000,3 30,6% 178.367,2 33,1% 2,45% Cyprus 15.637,5 27,7% 25.746,7 41,8% 14,14%	Latvia	21.757,3	36,6%	32.732,1	35,9%	-0,70%
Poland 180.606,2 32,5% 321,968,0 37,7% 5,17% Portugal 306.730,1 31,4% 361.098,2 33,5% 2,13% Romania 131.057,6 31,8% 185.315,4 31,5% -0,34% Sweden 370.320,4 35,1% 570.403,6 33,6% -1,49% Czechia 128.000,3 30,6% 178.367,2 33,1% 2,45% Cyprus 15.637,5 27,7% 25.746,7 41,8% 14,14%	Malta	4.507,3	20,3%	9.173,3	29,5%	9,20%
Portugal 306.730,1 31,4% 361.098,2 33,5% 2,13% Romania 131.057,6 31,8% 185.315,4 31,5% -0,34% Sweden 370.320,4 35,1% 570.403,6 33,6% -1,49% Czechia 128.000,3 30,6% 178.367,2 33,1% 2,45% Cyprus 15.637,5 27,7% 25.746,7 41,8% 14,14%	Netherlands	595.298,3	23,7%	778.870,9	22,5%	-1,26%
Romania 131.057,6 31,8% 185.315,4 31,5% -0,34% Sweden 370.320,4 35,1% 570.403,6 33,6% -1,49% Czechia 128.000,3 30,6% 178.367,2 33,1% 2,45% Cyprus 15.637,5 27,7% 25.746,7 41,8% 14,14%	Poland	180.606,2	32,5%	321.968,0	37,7%	5,17%
Sweden 370.320,4 35,1% 570.403,6 33,6% -1,49% Czechia 128.000,3 30,6% 178.367,2 33,1% 2,45% Cyprus 15.637,5 27,7% 25.746,7 41,8% 14,14%	Portugal	306.730,1	31,4%	361.098,2	33,5%	2,13%
Czechia 128.000,3 30,6% 178.367,2 33,1% 2,45% Cyprus 15.637,5 27,7% 25.746,7 41,8% 14,14%	Romania	131.057,6	31,8%	185.315,4	31,5%	-0,34%
Cyprus 15.637,5 27,7% 25.746,7 41,8% 14,14%	Sweden	370.320,4	35,1%	570.403,6	33,6%	-1,49%
	Czechia	128.000,3	30,6%	178.367,2	33,1%	2,45%
EU-26 14.768.318,7 30,7% 17.737.603,5 31,9% 1,19%	Cyprus	15.637,5	27,7%	25.746,7	41,8%	14,14%
	EU-26	14.768.318,7	30,7%	17.737.603,5	31,9%	1,19%

Source: WID, prepared by the authors

What is the potential revenue on the estimated taxable bases? For environmental taxation, taking into account that GHG emissions are very directly related to the consumption of fossil fuels subject to world prices, we propose that there be a convergence of tax rates in charged per tonne of $\rm CO_2$ emitted towards the values already existing among the EU-26 states. According to our estimates, Malta has the highest, closely followed by the Netherlands. A second calculation would be to use a lower target value, estimated as the simple average between the maximum value and the EU-26 average. In this way, states with initial tax values above this estimated value would not pay any additional tax, as shown in Table 11.

In summary, by converging the environmental taxation per tonne of ${\rm CO_2}$ emitted to maximum values or in the highest band of the EU-26 countries, we would potentially collect between ${\leq}323$ billion and ${\leq}640$ billion, with

Table 11 - Potential receipts of environmental taxes

Member State	Receipts E, P/RS, T (in million euros)	Emissions (million t CO ₂ equivalent)	t CO ₂ per habitant	Receipts euro/t CO2	regarding maximum value collected	Maximum potential receipts (in million euros)	Average difference between EU-26 maximum and average	% GDP	Average of maximum potential receipts and EU-26 average (in million euros)	% GDP
Germany	61.119,0	702,60	8,52	86,99	244,24	171.606,3	134,8	4,94%	94.741,5	2,73%
Austria	9.058,3	72,36	8,25	125,18	206,06	14.910,9	96,7	3,75%	6.994,3	1,76%
Belgium	12.627,6	104,41	9,03	120,94	210,30	21.958,2	100,9	4,59%	10.535,2	2,20%
Bulgaria	1.839,1	43,31	6,20	42,46	288,77	12.508,0	179,4	20,32%	7.769,4	12,62%
Croatia	1.921,6	19,12	4,62	100,51	230,73	4.411,3	121,3	7,94%	2.319,7	4,17%
Denmark	10.221,3	31,12	5,39	328,46	2,77	86,2	0,0	0,03%	0,0	0,00%
Slovakia	2.246,0	35,99	6,60	62,41	268,82	9.673,5	159,4	10,29%	5.736,7	6,10%
Slovenia	1.614,8	15,37	7,38	105,10	226,14	3.474,7	116,7	7,18%	1.793,7	3,71%
Spain	22.018,0	259,31	5,58	84,91	246,32	63.874,5	136,9	5,13%	35.505,8	2,85%
Estonia	889,6	18,50	14,19	48,08	283,16	5.239,3	173,8	18,89%	3.215,0	11,59%
Finland	6.730,0	43,41	7,81	155,02	176,22	7.650,5	66,8	3,19%	2.900,9	1,21%
France	56.327,0	314,74	4,81	178,97	152,27	47.924,3	42,9	1,97%	13.492,1	0,55%
Greece	7.086,0	65,57	5,89	108,07	223,16	14.632,5	113,8	7,98%	7.459,3	4,07%
Hungary	3.307,9	53,18	5,51	62,20	269,04	14.308,0	159,6	9,79%	8.489,8	5,81%
Ireland	5.027,5	36,55	7,54	137,56	193,68	7.078,4	84,3	1,98%	3.080,1	0,86%
Italy	58.304,0	331,56	5,60	175,85	155,39	51.521,1	46,0	2,87%	15.247,9	0,85%
Luxembourg	1.094,4	9,74	16,31	112,36	218,88	2.131,8	109,5	3,40%	1.066,3	1,70%
Latvia	899,7	8,38	4,38	107,37	223,86	1.875,8	114,5	6,12%	959,1	3,13%
Malta	345,7	1,04	2,41	331,23	0,00	0,0	0,0	0,00%	0,0	0,00%
Netherlands	27.570,0	156,41	9,13	176,26	154,97	24.240,0	45,6	2,98%	7.128,1	0,88%
Poland	13.545,5	317,65	8,35	42,64	288,59	91.672,6	179,2	17,18%	56.921,0	10,67%
Portugal	5.418,1	48,47	4,73	111,78	219,46	10.637,5	110,1	4,96%	5.334,6	2,49%
Romania	4.731,7	78,63	4,04	60,18	271,06	21.313,7	161,7	9,55%	12.711,4	5,70%
Sweden	9.779,3	44,75	4,45	218,54	112,70	5.043,0	3,3	1,06%	147,5	0,03%
Czechia	4.594,9	105,69	9,94	43,47	287,76	30.414,4	178,4	13,48%	18.851,5	8,36%
Cyprus	583,7	7,41	6,19	78,74	252,50	1.871,8	143,1	8,13%	1.060,8	4,61%
Total EU-26	328.900,6	2.925,3	6,64	112,43		640.058,4		4,58%	323.461,6	2,32%
Maximum value	•		331,23							

Median between max. value & EU-26 av. 221,83

Source: WID, prepared by the authors

impacts of up to 20% of GDP, and between 2% and 5% for the biggest states. Even the lower figure would cover almost all of the financing requirements of the UBI not covered by the Income Tax reform and the additional savings – Table 7.

To calculate the potential collection of the wealth tax, we will use the two tax bases that we have calculated previously.

First, using implicit taxation on capital, we can carry out an exercise similar to environmental taxation. We propose convergence of total-wealth tax rates towards the highest value already existing among the EU-26. According to our estimates, Greece has the highest, with 1.43% of total net wealth. The second calculation would be to use a lower target value, estimated as the simple average between the highest value and the EU-26 average. Thus, states with initial tax values greater than this estimated value – 1.01% – would not pay any additional tax. Table 12 shows the potential receipts.

We therefore obtain potential receipts of between €236 & €467 billion euros, the lower figure could fund scenarios 3 and 4 alone, and the higher, all four.

Table 12 - Potential wealth tax receipts

	Receipts from wealth KS- (E,P/RS,T) (in	Total Net Wealth (in	% Implicit taxation on	Difference regarding	Maximum potential receipts (in million		Median difference between maximum and	Median potential receipts between maximum and EU- 26 average (in		
Member State	million euros)	million euros)	wealth	maximum value	euros)	% GDP	EU-26 average	million euros)	% GDP	GDP
Germany	43.802,0	11.515.518,9	0,38%	1,05%	120.928,4	3,48%	0,63%	72.523,5	1,26%	3.473.260,0
Austria	3.916,1	1.360.144,2	0,29%	1,14%	15.540,9	3,91%	0,72%	9.823,6	0,99%	397.518,5
Belgium	19.044,2	2.110.711,7	0,90%	0,53%	11.149,7	2,33%	0,11%	2.277,4	3,98%	478.238,9
Bulgaria	448,7	143.921,8	0,31%	1,12%	1.610,1	2,62%	0,70%	1.005,2	0,73%	61.558,0
Croatia	636,6	129.614,9	0,49%	0,94%	1.217,6	2,19%	0,52%	672,7	1,15%	55.571,4
Denmark	8.939,0	1.181.407,7	0,76%	0,67%	7.961,1	2,57%	0,25%	2.995,2	2,89%	309.526,4
Slovakia	698,2	236.366,2	0,30%	1,14%	2.683,1	2,85%	0,71%	1.689,5	0,74%	94.048,0
Slovenia	490,9	119.865,0	0,41%	1,02%	1.223,8	2,53%	0,60%	719,9	1,01%	48.396,7
Spain	38.155,0	6.500.243,9	0,59%	0,84%	54.831,5	4,41%	0,42%	27.508,1	3,07%	1.244.375,0
Estonia	121,4	76.019,3	0,16%	1,27%	966,1	3,48%	0,85%	646,5	0,44%	27.732,3
Finland	3.748,0	658.064,2	0,57%	0,86%	5.665,7	2,36%	0,44%	2.899,5	1,56%	239.858,0
France	85.846,0	12.364.408,9	0,69%	0,74%	91.027,9	3,73%	0,32%	39.054,7	3,52%	2.437.635,0
Greece	6.814,0	476.334,2	1,43%	0,00%	0,0	0,00%	0,00%	0,0	3,72%	183.250,4
Hungary	2.152,1	514.063,6	0,42%	1,01%	5.201,6	3,56%	0,59%	3.040,8	1,47%	146.113,2
Ireland	4.190,2	825.159,9	0,51%	0,92%	7.613,8	2,13%	0,50%	4.145,3	1,17%	356.704,6
Italy	71.380,0	8.830.889,7	0,81%	0,62%	54.946,6	3,06%	0,20%	17.826,4	3,97%	1.796.633,8
Latvia	319,0	91.228,1	0,35%	1,08%	986,0	3,22%	0,66%	602,5	1,04%	30.647,2
Luxembourg	45,0	109.039,9	0,04%	1,39%	1.514,8	2,42%	0,97%	1.056,5	0,07%	62.704,2
Malta	194,8	31.113,8	0,63%	0,80%	250,3	1,78%	0,38%	119,5	1,39%	14.047,1
Netherlands	13.412,0	3.466.960,2	0,39%	1,04%	36.183,2	4,45%	0,62%	21.610,0	1,65%	813.055,0
Poland	9.327,3	854.920,3	1,09%	0,34%	2.902,4	0,54%	0,00%	0,0	1,75%	533.599,9
Portugal	5.240,2	1.077.007,9	0,49%	0,94%	10.166,5	4,74%	0,52%	5.639,3	2,44%	214.374,6
Romania	1.701,9	588.981,8	0,29%	1,14%	6.723,5	3,01%	0,72%	4.247,8	0,76%	223.162,5
Sweden	5.475,3	1.698.281,2	0,32%	1,11%	18.818,8	3,95%	0,69%	11.680,2	1,15%	476.869,5
Czechia	1.333,8	539.570,1	0,25%	1,18%	6.384,8	2,83%	0,76%	4.116,7	0,59%	225.613,5
Cyprus	280,0	61.588,2	0,45%	0,98%	601,0	2,61%	0,56%	342,1	1,22%	23.009,9
TOTAL EU-26	327.711,5	55.561.425,5	0,59%		467.099,2	3,34%		236.243,1	2,35%	13.967.503,6
Maximum value			1,43%							

Simple mean of maximum value and EU-26 average 1,43%

Source: EUROSTAT, WID, prepared by the authors

The second method is to eliminate the increase in the quota of the wealthiest 2% - p98 - of the total net wealth during the period 2010-2019 and maintain it at its initial value, or at what it was already – if it was lower. Two additional variants might be to estimate a tax on the wealthiest 2% at the lowest value of all states, or that it be the simple average between the minimum value and the mean of the EU-26.

In the first calculation, we assume that the increase of the quota to be eliminated has been carried out equally during the nine years in the period 2010-2019, and we thus estimate the total growth to be eliminated and divide it by nine. It would be necessary to establish a tax of \leq 990 billion – \leq 110 billion annually during the period so that the share of wealth in the hands of the richest 2% does not grow. It should be noted that this is not a transfer of wealth from the 2% to the assets of the rest, but towards financing the UBI – that is, the wealth of the poorest 98% does not grow. The average tax on the assets of the wealthiest 2% in total would be 0.62%, with a maximum of 14.1% in Cyprus – a tax haven – as shown in Table 13.

Table 13 - Potential receipts from 98th percentile of wealth (Variant 1)

Member State	Net wealth 98th percentile 2010 (million euros)	% 98th percentile v. total 2010	Net wealth 98th percentile 2019 (million euros)	% 98th percentile v. total 2019	Difference 98th percentile 2010-2019 (million euros)	Variation 98th percentile 2010-2019	Maintain tax on 98th percentile quota v. total 2010 only if 98th percentile 2019 > 98th percentile 2010 (million euros)	Annual tax (million euros)	Tax on 98th percentile 2019
Germany	2.976.337,8	34,66%	4.090.530,4	35,52%	1.114.192,6	0,86%	151.378,7	16.819,9	0,41%
Austria	355.037,8	32,32%	495.162,9	36,41%	140.125,0	4,09%	82.157,4	9.128,6	1,84%
Belgium	469.452,9	25,95%	507.488,4	24,04%	38.035,5	-1,90%	0,0	0,0	0,00%
Bulgaria	42.365,7	30,38%	47.148,2	32,76%	4.782,5	2,38%	4.918,1	546,5	1,16%
Croatia	28.969,2	29,71%	38.384,8	29,61%	9.415,7	-0,10%	0,0	0,0	0,00%
Denmark	233.074,0	26,44%	315.141,6	26,68%	82.067,6	0,23%	3.732,5	414,7	0,13%
Slovakia	35.727,0	18,76%	57.574,6	24,36%	21.847,6	5,59%	16.277,6	1.808,6	3,14%
Slovenia	22.010,6	18,37%	36.593,0	30,53%	14.582,4	12,16%	17.850,7	1.983,4	5,42%
Spain	1.992.051,7	30,15%	2.075.522,6	31,93%	83.470,9	1,78%	165.833,5	18.425,9	0,89%
Estonia	18.624,6	39,39%	31.865,4	41,92%	13.240,8	2,53%	3.174,6	352,7	1,11%
Finland	143.445,1	25,92%	168.044,7	25,54%	24.599,6	-0,39%	0,0	0,0	0,00%
France	3.334.270,2	31,85%	4.110.755,4	33,25%	776.485,2	1,40%	253.887,6	28.209,7	0,69%
Greece	116.185,1	21,71%	150.249,7	31,54%	34.064,5	9,84%	59.840,6	6.649,0	4,43%
Hungary	131.346,2	33,21%	216.820,5	42,18%	85.474,3	8,96%	68.994,5	7.666,1	3,54%
Ireland	231.483,1	34,51%	273.756,7	33,18%	42.273,6	-1,33%	0,0	0,0	0,00%
Italy	2.866.972,1	29,45%	2.620.507,1	29,67%	-246.464,9	0,22%	28.098,3	3.122,0	0,12%
Latvia	21.757,3	36,58%	32.732,1	35,88%	10.974,8	-0,70%	0,0	0,0	0,00%
Luxembourg	17.050,7	34,78%	38.382,3	35,20%	21.331,6	0,42%	704,2	78,2	0,20%
Malta	4.507,3	20,29%	9.173,3	29,48%	4.666,0	9,20%	3.589,2	398,8	4,35%
Netherlands	595.298,3	23,73%	778.870,9	31,92%	183.572,6	-1,26%	0,0	0,0	0,00%
Poland	180.606,2	32,49%	321.968,0	37,66%	141.361,8	5,17%	65.427,4	7.269,7	2,26%
Portugal	306.730,1	31,39%	361.098,2	33,53%	54.368,1	2,13%	33.499,9	3.722,2	1,03%
Romania	131.057,6	31,81%	185.315,4	31,46%	54.257,8	-0,34%	0,0	0,0	0,00%
Sweden	370.320,4	35,08%	570.403,6	33,59%	200.083,2	-1,49%	0,0	0,0	0,00%
Czechia	128.000,3	30,61%	178.367,2	33,06%	50.366,9	2,45%	19.021,0	2.113,4	1,18%
Cyprus	15.637,5	27,67%	25.746,7	41,80%	10.109,1	14,14%	12.038,0	1.337,6	5,20%
Total EU-26	14.768.318,7	30,73%	17.737.603,5	31,92%	2.969.284,8	1,19%	990.423,8	110.047,1	0,62%

Source: WID, prepared by the authors

The two additional variants give us similar results, between €98 billion and €172 billion, assuming the states converge over the nine years, but with a spread impact, with a maximum tax of 2.05% in Hungary, as shown in Table 14.

With these potential receipts, we can define several proposals for combinations of environmental and capital taxation to cover the financing requirements of the UBI.

Table 14 - Potential receipts on 98th percentile wealth (Variant 2)

Member State	Net wealth 98 th percentile 2019 (million euros)	% 98th percentile of total	Difference minimum value	Minimum potential receipts (million euros)	Annual potential over 9 years (million euros)	Tax on 98th percentile 2019	Average difference between minimum & EU- 26 average	Average minimum potential receipts & EU-26 average	Annual potential over 9 years (million euros)	Tax on 98th percentile 2019
Germany	4.090.530,4	35,52%	11,8%	482.524,5	53.613,8	1,31%	7,70%	314.842,3	34.982,5	0,86%
Austria	495.162,9	36,41%	12,7%	62.783,8	6.976,0	1,41%	8,58%	42.485,7	4.720,6	0,95%
Belgium	507.488,4	24,04%	0,3%	1.612,4	179,2	0,04%	0,00%	0,0	0,0	0,00%
Bulgaria	47.148,2	32,76%	9,0%	4.259,3	473,3	1,00%	4,93%	2.326,6	258,5	0,55%
Croatia	38.384,8	29,61%	5,9%	2.260,4	251,2	0,65%	1,79%	686,9	76,3	0,20%
Denmark	315.141,6	26,68%	2,9%	9.294,6	1.032,7	0,33%	0,00%	0,0	0,0	0,00%
Slovakia	57.574,6	24,36%	0,6%	364,1	40,5	0,07%	0,00%	0,0	0,0	0,00%
Slovenia	36.593,0	30,53%	6,8%	2.489,3	276,6	0,76%	2,70%	989,3	109,9	0,30%
Spain	2.075.522,6	31,93%	8,2%	170.279,2	18.919,9	0,91%	4,10%	85.197,7	9.466,4	0,46%
Estonia	31.865,4	41,92%	18,2%	5.796,9	644,1	2,02%	14,09%	4.490,6	499,0	1,57%
Finland	168.044,7	25,54%	1,8%	3.042,4	338,0	0,20%	0,00%	0,0	0,0	0,00%
France	4.110.755,4	33,25%	9,5%	391.381,7	43.486,9	1,06%	5,42%	222.870,5	24.763,4	0,60%
Greece	150.249,7	31,54%	7,8%	11.745,2	1.305,0	0,87%	3,72%	5.586,1	620,7	0,41%
Hungary	216.820,5	42,18%	18,5%	40.007,7	4.445,3	2,05%	14,35%	31.119,7	3.457,7	1,59%
Ireland	273.756,7	33,18%	9,5%	25.871,2	2.874,6	1,05%	5,35%	14.649,2	1.627,7	0,59%
Italy	2.620.507,1	29,67%	5,9%	155.882,7	17.320,3	0,66%	1,85%	48.460,8	5.384,5	0,21%
Latvia	32.732,1	35,88%	12,2%	3.978,1	442,0	1,35%	8,05%	2.636,3	292,9	0,89%
Luxembourg	38.382,3	35,20%	11,5%	4.404,2	489,4	1,27%	7,38%	2.830,8	314,5	0,82%
Malta	9.173,3	29,48%	5,8%	528,1	58,7	0,64%	1,66%	152,1	16,9	0,18%
Netherlands	778.870,9	23,73%	0,0%	0,0	0,0	0,00%	0,00%	0,0	0,0	0,00%
Poland	321.968,0	37,66%	13,9%	44.865,7	4.985,1	1,55%	9,84%	31.667,3	3.518,6	1,09%
Portugal	361.098,2	33,53%	9,8%	35.395,4	3.932,8	1,09%	5,70%	20.593,0	2.288,1	0,63%
Romania	185.315,4	31,46%	7,7%	14.339,6	1.593,3	0,86%	3,64%	6.743,0	749,2	0,40%
Sweden	570.403,6	33,59%	9,9%	56.249,5	6.249,9	1,10%	5,76%	32.867,1	3.651,9	0,64%
Czechia	178.367,2	33,06%	9,3%	16.644,4	1.849,4	1,04%	5,23%	9.332,6	1.037,0	0,58%
Cyprus	25.746,7	41,80%	18,1%	4.654,7	517,2	2,01%	13,98%	3.599,3	399,9	1,55%
Total EU-26	17.737.603,5	31,92%		1.068.130,5	118.681,2	0,67%		569.284,4	63.253,8	0,36%
		00 700/								

Minimum valu

Median of min. value & EU-26 avg. 27,83%

Source: WID, prepared by the authors

As an example, we make two proposals, one with a lesser weight of environmental taxes – 3% of the total requirements – and another with greater weight – 50% – with the rest of taxation on capital; and a third with capital taxation that eliminates the growth in the share of the wealthiest 2% in the period 2010-2019, and the rest covered by environmental taxation. It should be kept in mind, as we said earlier, that environmental taxes are less progressive – in general they affect everyone – than taxation on capital of the wealthiest 2%. For example, according to data from the Bank of Spain's financial survey of the families, 76% of households in the richest 2% are also among the 20% with the highest income. Table 15 summarizes the results of this section and the three proposals indicated.

Table 15 - Summary of resulting potential receipts

Item (million euros)	Scenario 1	Scenario 2	Scenario 3	Scenario 4
External financing requirements after ex-post income tax	-378.646,9	-418.564,9	-306.433,0	-116.839,9
% GDP	-2,71%	-3,00%	-2,19%	-0,84%
savings on prison inmates	4.725,6	4.489,3	4.489,3	3.150,4
Savings on administrative expenditure	59.814,4	59.814,4	59.814,4	59.814,4
Pending funding	-314.106,9	-354.261,1	-242.129,3	-53.875,1
% GDP	-2,25%	-2,54%	-1,73%	-0,39%
on total wealth	-0,57%	-0,64%	-0,44%	-0,10%
on 98th percentile	-1,77%	-2,00%	-1,37%	-0,30%
Potential revenue capacity				
environmental taxes in country with highest rates	640.058,4	640.058,4	640.058,4	640.058,4
median environmental taxes between highest and average	323.461,6	323.461,6	323.461,6	323.461,6
highest non-environmental capital taxes v. GDP	467.099,2	467.099,2	467.099,2	467.099,2
median non-environmental capital taxes between highest and avg. v. GDP	236.243,1	236.243,1	236.243,1	236.243,1
capital taxes to maintain wealth quota for 98th percentile at 2010 value	110.047,1	110.047,1	110.047,1	110.047,1
capital taxes to set 98th percentile quota at lowest countries rates	172.295,0	172.295,0	172.295,0	172.295,0
capital taxes to set 98th percentile quota at median between minimum & avg.	98.236,3	98.236,3	98.236,3	98.236,3
Proposal 1				
35% environmental taxes	109.937,4	123.991,4	84.745,2	18.856,3
65% capital taxes	204.169,5	230.269,7	157.384,0	35.018,8
environmental taxes % GDP	0,79%	0,89%	0,61%	0,14%
% environmental taxes v. potential (median of highest and average)	33,99%	38,33%	26,20%	5,83%
% capital taxes on 98th percentile	1,15%	1,30%	0,89%	0,20%
% capital taxes v. potential (median of highest and average)	86,42%	97,47%	66,62%	14,82%
Proposal 2				
50% environmental taxes	157.053,5	177.130,6	121.064,6	26.937,6
50% capital taxes	157.053,5	177.130,6	121.064,6	26.937,6
environmental taxes % GDP	1,12%	1,27%	0,87%	0,19%
% environmental taxes v. potential (median of highest and average)	48,55%	54,76%	37,43%	8,33%
% capital taxes on 98th percentile	0,89%	1,00%	0,68%	0,15%
% capital taxes v. potential (median of highest and average)	66,48%	74,98%	51,25%	11,40%
Proposal 3				
capital taxes to maintain quota 98th percentile at 2010 value	110.047,1	110.047,1	110.047,1	53.875,1
other environmental taxes	204.059,9	244.214,0	132.082,2	0,0
environmental % GDP	1,46%	1,75%	0,95%	0,00%
% environmental taxes v. potential (median of highest and average)	34,02%	34,02%	34,02%	16,66%
% capital taxes on 98th percentile	0,62%	0,62%	0,62%	0,30%
% capital taxes v. potential (median of highest and average)	86,38%	103,37%	55,91%	0,00%

GDP 13.967.503,6 Total Wealth 55.561.425,5 98th Percentile 17.737.603,5

Source: EUROSTAT, WID, prepared by the authors

Finally, what would the transfer be from wealthy to poor in all four scenarios? We are not able to make an exact estimate of the total losers and winners, since we would need wealth microdata similar to that of the EU-SILC sample, but we can estimate the total net cost the losers will pay in terms of percentage of GDP. See Table 16.

Table 16 - Transfers between wealthy and poor in the four scenarios

Item (in million euros)	Scenario 1	Scenario 2	Scenario 3	Scenario 4
GDP EU-26	13.967.503,6	13.967.503,6	13.967.503,6	13.967.503,6
Income Tax ex-ante	1.406.112,1	1.406.112,1	1.406.112,1	1.406.112,1
Wealth Taxesex-ante	45.714,3	45.714,3	45.714,3	45.714,3
Income Tax ex-post	3.184.933,0	3.185.786,8	3.199.823,3	3.248.779,2
Extra Income Tax paid eliminating IR (IT ex-post- $\mathrm{IT/IR}$ ex-ante)	1.733.106,6	1.733.960,4	1.747.996,9	1.796.952,8
Increase v. GDP	12,41%	12,41%	12,51%	12,87%
Losses in Income Tax reform	441.616,0	435.440,8	474.608,3	565.835,8
Losses through Income Tax reform v. GDP	3,16%	3,12%	3,40%	4,05%
Total losses (IT+compensations-additional savings) v. GDP	5,41%	5,65%	5,13%	4,44%

Source: EUROSTAT, WID, prepared by the authors

5 Conclusions

The research we now conclude means to show how a UBI, i.e. an unconditional monetary allocation to the entire EU population, can be financed from three taxes: on income, wealth and CO_2 . We mean to show whether it is possible to finance a UBI with the following characteristics:

- a) Individual, unconditional and universal.
- b)Replaces all other monetary benefits received from the state, as long as this amount is less than the UBI; when it is higher, the part that exceeds it will continue to be perceived under the same conditions.
- c) Not subject to income tax.
- d)An amount that must be in relation to the at-risk-of-poverty threshold.
- e) No household below the wealthiest 20% loses regarding the situation prior to the reform we propose, nor should any household be considered poor.

The funding of the UBI that we propose in this research is fundamentally achieved with a reform of income tax and with the introduction of a wealth tax and a carbon tax, or in general terms, an environmental tax. Likewise, the funding of the UBI does not deduct any amount from what the EU states currently collect through their income tax, which is meant to be the base tax to maintain the fundamental pillars of their social investment: health and education.

Although the main objective of the research was the funding through the three above-mentioned taxes, we also mean to briefly explain our conception of justice – republican – and our conception of taxes. According to republican freedom, no one can be free if their material existence is not ensured. In other words, the poor are not and cannot be free. Hence, the normative justification according to which a UBI allows the entire population to escape poverty is an essential condition for freedom. We have considered four different scenarios, with different amounts, in order to show how it is possible to fund a UBI of the characteristics that we have mentioned. And we also mean to make our conviction explicit: that taxes – and how they are

distributed among the different parts of the population, the wealthiest and the rest, that is the majority – are a product not of technique but of policy. The technical aspects of tax can be and are becoming increasingly sophisticated, but that does not tell us whether the very rich should pay 90% of their fortunes or 1%. Or nothing at all, as in the Autonomous Community of Madrid and others who want to follow it, all governed by the right-wing applauded by employers, and of course, the great fortunes. Opting for one option or another is not a technical issue, it is a political one.

The research has been carried out on the basis of new data, and we are not aware of any other previous studies that have specified how to fund a UBI in the EU from these three taxes on income, wealth and carbon. For this reason, we believe that this is completely original research. Obviously, based on the same data available, other taxes might have been proposed other than the three taxes, or on how to apply them, both in the estimation of the tax base and in the possible rates. What has been chosen is as debatable as any other option, for what we might call very moderate tax rates with moderate effects, justified either by the convergence between levies at a European level, or cutting the growing accumulation of wealth by the wealthiest. We assume that some will consider them to be high rates. On the other hand, others will be of the contrary opinion, that they are meagre. Other options are possible, and we do not rule out offering others later on while continuing this research. It may likewise extend to other international levels, all the while moving towards a global UBI to end the great inequalities that jeopardise the freedom of the great majority who are not rich.

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A message from Coppieters Foundation

Since its creation in 2007, the Coppieters Foundation has been developing new ideas and producing knowledge on recurring subjects in the European public debate. Those include self-determination, multilevel governance, geography, diversity, gender equality, migrations, economic development, peacebuilding and the protection of human and minority rights.

As a research centre, we have always strived for high quality books and policy papers which contribute new reflections and visions for an inclusive and sustainable Europe. Our publications benefit from the knowledge and experience of a wide range of contributors with diverse backgrounds and fields of expertise.

With this in mind, we released this publication, of which I am particularly proud because it represents a new and important contribution to European public policy debates. I am certain that it will have a significant impact on European policymakers, academics, activists and citizens.

I would like to thank and acknowledge the authors, editors and coordinators of this study for their excellent contribution to the Foundation's work. And I also thank you, the reader, for your interest in our projects.

Antonia Luciani Secretary-General of the Coppieters Foundation www.ideasforeurope.eu

The aims of the Coppieters Foundation

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Maurits Coppieters (Sint-Niklaas, 1920 – Deinze, 2005)

The Fleming Maurits Coppieters studied history and later became a Doctor of Laws and obtained a Master's degree in East European studies. During the Second World War, he refused to work for the German occupier. After many years as a teacher, he worked as a lawyer for a while. He was one of the people who re-established the Vlaamse Volksbeweging (Flemish People's Movement), of which he was the President from 1957-1963.



Coppieters' political career began when he became a member of the Flemish nationalist party Volksunie (VU), which was formed in 1954. With the exception of two years, Coppieters was a town councillor between 1964 and 1983. He was also elected as a member of the Belgian Chamber (1965-1971) and Senate (1971-1979). At the same time, Coppieters became President of the newly formed 'Cultuurraad voor de Nederlandstalige Cultuurgemeenschap' (Cultural Council for the Dutch-speaking Community), from which the Flemish Parliament emerged, when the VU formed part of the government. In 1979, Coppieters was elected during the first direct elections for the European Parliament.

As a regionalist, he became a member of the Group for Technical Coordination and Defence of Independent Groupings and Members in the European Parliament (TCDI). Among other things, he made a name for himself when he championed the cause of the Corsicans. In the meantime, Coppieters also played a pioneering role in the formation of the European Free Alliance, of which he became the Honorary President and continued to play a role in its expansion, even after he said farewell to active politics in 1981. In 1996, Coppieters joined forces with the President of the Flemish Parliament, Norbert De Batselier, to promote 'Het Sienjaal', a project with a view to achieve political revival beyond the party boundaries. Coppieters died on November 11, 2005.

Among other things, Coppieters was the author of: 'Het jaar van de Klaproos'; 'Ik was een Europees Parlementslid'; 'De Schone en het Beest'. He was an honorary member of the EFA.

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