Politics and Governance (ISSN: 2183–2463)
2023, Volume 11, Issue 4, Pages 6–16
https://doi.org/10.17645/pag.v11i4.7240

Article

Revenue Capacity of the EU: Taxes, Tax Sharing, and Resource Pooling

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Submitted: 29 May 2023 | Accepted: 6 September 2023 | Published: 27 October 2023

Abstract
This article analyses the revenue capacity at the "centre" of the EU. It first outlines major elements ("segments") of EU "federal" fiscal capacity, both on the revenue and expenditure side, as well as on- and off-budget. It provides a new typology of taxes in a multi-level setting, based on tax ownership and decision-making on tax bases and/or rates. It then enters the so-called EU budgetary galaxy and (a) analyses how the centre utilises different types of revenue capacity and (b) discusses if the so-called "own resources" have tax features. The article finds that these own resources, to a large extent, de facto constitute taxing power, that the EU significantly uses off-budget borrowing capacity (through the European Investment Bank and the European Commission) and that the EU has a variety of schemes that offer revenue capacity to the centre, through the pooling of resources (transfers, guarantees) by its member states and by third countries. The way in which a large portion of the Next Generation EU resources have been channelled into the EU budget (by means of externally assigned revenue) completes the image of a centre with fiscal capacity, rather than an entity that spends but has no true fiscal powers.

Keywords
EU budget; EU finances; fiscal autonomy; fiscal capacity; fiscal integration; Next Generation EU; own resources; revenue capacity; tax sharing

Issue
This article is part of the issue "Comparative Fiscal Federalism and the Post-Covid EU: Between Debt Rules and Borrowing Power" edited by Sergio Fabbrini (LUISS University), Tiziano Zgaga (University of Konstanz), and Tomasz P. Woźniakowski (University of Wrocław/ LUISS University).

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1. Introduction

Possibilities to provide the EU with the "power to tax" have been discussed for decades, most recently by the European Parliament (Fernandes & Hayer, 2023), but such a power has never formally materialised. Instead, in the EU there is an upward-funding scheme with transfers which euphemistically are labelled "own resources" (OR), that pay for the expenditure in the Multiannual Financial Framework (MFF) and the annual EU budgets. The EU is therefore said to suffer from an extreme negative fiscal gap: The centre spends but does not raise any autonomous revenue. This is contrary to most consolidated federations (and to most unitary states), where there is a so-called positive fiscal gap (Boadway & Keen, 1996): The centre raises more revenue than needed for its own expenditure, resulting in downward funding from the centre to the units.

In contrast to the state of affairs regarding the regular long-term EU budget, EU public finances at large have evolved rapidly under the pressure of major crises. In response to the eurozone crisis, member states (MSs) started to pool resources to fund stability mechanisms and eventually created the European Stability Mechanism (ESM). In response to the Covid-19 pandemic, Next Generation EU (NGEU), an unprecedented recovery program financed through bonds issuing on behalf of the EU by the European Commission (EC), was created to supplement the regular long-term budget. Some have referred to this as a Hamiltonian moment in the development of the EU fiscal regime (for a discussion on the adequacy of that comparison, see Georgiou, 2022). In response to Russia's invasion of Ukraine, the European Council decided in May of 2022 to provide Ukraine with exceptional Macroeconomic Financial Assistance (MFA+; this is specifically addressing

Ukraine). In addition, resources for military assistance were made available to Ukraine through the European Peace Facility (EPF). More generally, resource pooling by MSs has a longer history which includes the European Development Fund (now mainstreamed into the general EU budget), InvestEU (the former Juncker Plan), and several earlier trust funds. Rather than developing into a single, autonomous, EU budgetary order, EU finances have developed into a "budgetary galaxy," with a variety of funds and instruments positioned off-budget and around the regular EU budget (Crowe, 2017; High Level Group on Own Resources, 2016, Annex IV).

This article deals with the revenue capacity of the "centre" or "federal" level of the EU. It analyses what revenue capacity this centre currently uses, both on- and off-budget. Regarding the regular long-term budget, this article calls a spade a spade and challenges the prevalent view that the EU has no federal taxes. Both the traditional own resources (TOR) and the VAT transfers are de facto EU taxes and constitute autonomous revenue capacity (ARC) for the centre. It argues that resource pooling by means of transfers by EU MSs, and in some cases third countries, has always been quite common in the wider galaxy and that the same is true for resource pooling based on borrowing. What is new (or Hamiltonian) with NGEU borrowing is that resources are channelled into the regular long-term budget, as externally assigned revenue (EAR).

The article is structured as follows: It first deals with the concepts of fiscal capacity, fiscal regulation, and fiscal autonomy; subsequently, actual revenue capacity is analysed; the final section contains the discussion and conclusion. Unless stated explicitly otherwise, the term EU will be used hereafter to denote its centre or "federal" level.

2. Conceptual Issues

2.1. Fiscal Capacity in Seven Segments

In this article, *fiscal capacity* is understood as the power to tax, borrow, and spend. If we leave aside borrowing capacity for now and first focus on the power to tax and spend, governments can be placed in a so-called expenditure-revenue space, as shown in Figure 1 for a federal government.

Along the horizontal axis, the share of federal government in total government revenues is plotted. This refers to autonomous resources for the federal level, using its own extractive capacity, i.e., its ARC. This builds on the definition given in the introduction to this thematic issue (Woźniakowski et al., 2023), where such ARC is defined as fiscal capacity resulting from independent sources, i.e., from central taxing powers. This conceptualisation of revenue (or tax) capacity is thus different from other uses of the same term or of similar and related terms, such as tax(able) capacity and tax effort in the context of effectiveness of tax systems, for example of developing countries (e.g., Chigome & Robinson, 2021). The article does not address capacity aspects of taxes that relate to the sensitivity of revenues to rate changes (tax elasticity) or the development of the tax base (tax buoyancy; e.g., Cornevin et al., 2023).

Along the vertical axis of Figure 1, the share of federal government in total government expenditure is plotted. Here we also refer to the autonomous dimension: expenditure made for the federation's own production, i.e., for its own policies and services, relating to its *autonomous spending capacity* (ASC) as defined in the introduction to this thematic issue (Woźniakowski et al., 2023). The two shares can be thought of as two dimensions of (de)centralisation. The further away from the origin (O) a combination of revenue-share and expenditure-share lies, the more centralised the federation is.

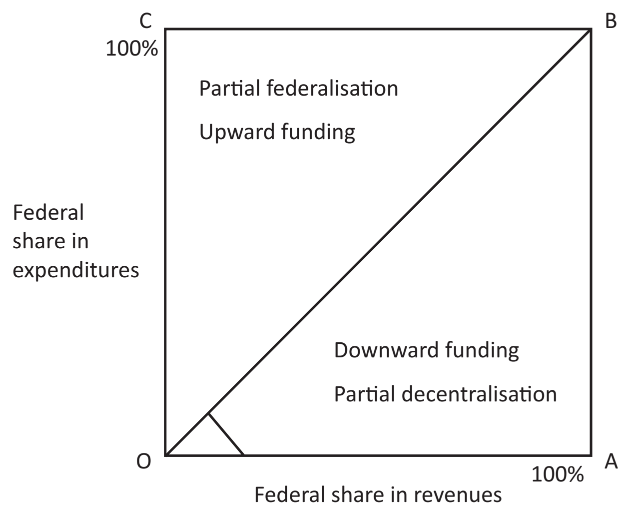

Figure 1. Federal government shares in total government expenditures and revenues. Source: Author's work based on Steunenberg and Mol (1997).

On the line OB lie all the points with an equal revenue-share and expenditure-share for federal government. Here, for both the federal level and the units within the federation there is full congruency between expenditure (or production) and revenue. This means there is no need for transfers between the federal level and the units. Points O, A, B, and C stand for four different highly hypothetical ideal types of fiscal structure: In O there is full decentralisation, without any federal government; in B there is full centralisation, without units; in A there is federal taxation but with production at the unit level; and in C there is federal production with taxation at the unit level. The upper-left triangle of Figure 1 represents situations where federal revenue capacity falls short of spending capacity. The lower-right triangle represents cases where federal revenue capacity exceeds spending capacity. Such incongruencies between revenue and spending capacity imply vertical fiscal gaps (Boadway & Keen, 1996). As seen from the federal level, a negative fiscal gap results in the need for upward

funding. In the conceptualisation used in this thematic issue ((Woźniakowski et al., 2023), and from the perspective of the federal level, such funding would create *dependent revenue capacity*. A positive vertical gap creates the opportunity for downward transfers (or *transfer capacity*).

In the literature, there is some confusion over terms. Vertical fiscal *gaps* may imply incongruencies that as such are not necessarily problematic but need to be offset by means of intergovernmental transfers. Such gaps may actually be desirable because, for example, downward funding provides the federal level with the possibility to use fiscal transfers for reasons of equity (such as equalisation transfers) and/or stability. Highly relevant to the EU situation, upward and downward funding may be combined in that upward funding provides the means for the federal level to engage in downward funding. Vertical fiscal *imbalances* may imply an undesirable mismatch or misallocation, which should be corrected by changing the allocation of capacities as such. Sharma (2012) suggests using the term vertical fiscal *asymmetries* for both cases. Brueckner (2009) suggests using the term *partial decentralisation* when production is decentralised but not matched with revenue capacity (the lower-right triangle in Figure 1). *Partial federalisation* refers then to a situation where federal production is not matched by revenue capacity (the upper-left triangle).

Partial federalisation thus implies a need for additional fiscal capacity, derived from upward funding. Deviating slightly from the introduction to this special issue (Woźniakowski et al., 2023), we distinguish between two elements of revenue capacity: (a) ARC and (b) transfer-based revenue capacity (TBRC). For the latter, we do not use the term "budgetary capacity" because this term implies a more generic type of capacity, almost equal to fiscal capacity. If we then bring in borrowing, ARC can be further split into (a) autonomous tax capacity (ATC) and (b) autonomous borrowing capacity (ABC). On the expenditure side, we make a similar distinction for spending capacity: (a) ASC and (b) transfer spending capacity (TSC).

A complication arises if we take into account the possibility of off-budget expenditures and revenues. This issue is highly relevant to the EU's finances. In addition to on-budget revenue capacity (ATC + ABC + TBRC) and on-budget spending capacity (ASC + TSC), we must distinguish between off-budget revenue capacity and off-budget spending capacity. Figure 2 shows these five different segments of (on-budget) fiscal capacity and the two off-budget segments of fiscal capacity. For now, we do not make further distinctions within the off-budget segments. The dotted lines indicate that the share of the various on-budget (revenue and expenditure) components can vary. Still, ATC + ABC + TBRC = ASC + TSC. Also, off-budget revenue capacity = off-budget spending capacity.

2.2. Fiscal Regulation: Tax Ownership and Decision-Making

If we focus on taxing capacity (segment ATC), federal taxing powers can be non-existent, exclusive, or shared, depending on who "owns" the relevant tax base. In addition, a distinction can be made depending on who decides on the content of the tax base (i.e., what exactly is taxable and what is not?) and/or the level of the rates. In the literature, two possibilities have been especially discussed. First, there is tax sharing: Different levels of government tax the same base. Secondly, there is joint taxation: a tax-sharing situation where the governments involved also co-decide on the various parts of the base and rates (Groenendijk, 2011). Table 1 shows that there are more possibilities.

Sometimes it is argued that there is little difference between tax sharing and upward or downward funding by means of intergovernmental grants, for example,

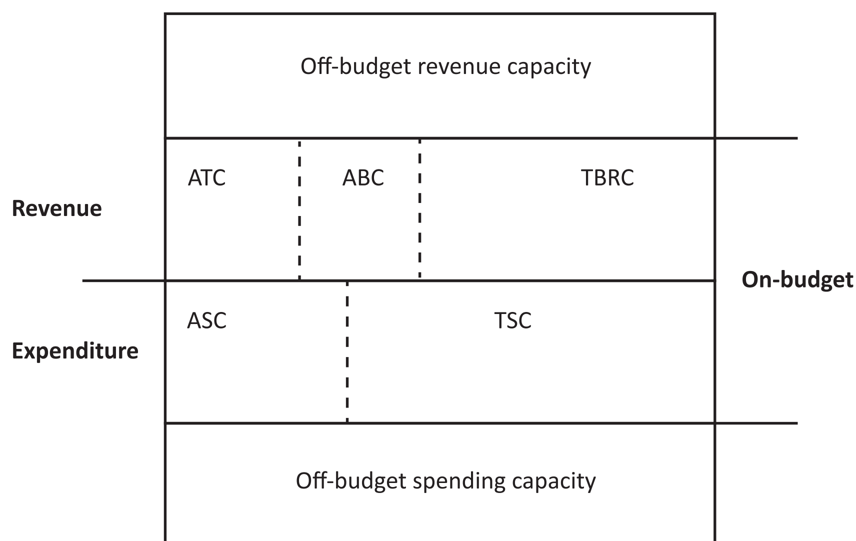

Figure 2. Fiscal capacity in seven segments.

Table 1. Division of taxing powers according to base and decision-making.

		Ownership of tax base		
		At the federal level (exclusive)	Co-ownership (tax sharing)	At the unit level (exclusive)
Decision on tax base content and/or rates	Federal level decides	Autonomous federal tax	Centrally split taxation	Centrally regulated tax at the unit level
	Federal level and units decide together	Coordinated federal tax	Joint taxation	Coordinated tax at the unit level
	Units decide	Decentrally regulated federal tax	Decentrally split taxation	Autonomous tax at the unit level

when, with downward funding, the level of such grants is linked to the level of (certain) federal tax revenues and the units are entitled to a certain share of the federal revenue cake. Tax sharing however involves some elements that are often missing in the case of intergovernmental grants (see in more detail Blöchliger & Petzold, 2009). First, tax sharing implies risk sharing as both the federal level and the units bear the risk of tax revenue slack and fluctuations. With intergovernmental grants, grant levels are often set for the longer term and are independent of short-term revenue fluctuations (with the risk of such fluctuations being borne by the granting government). Secondly, revenues from tax sharing are non-conditional, which is not necessarily the case with intergovernmental grants.

Both revenues from tax sharing and from intergovernmental grants can be earmarked. This is true for non-shared taxes as well, as it is for borrowing. Earmarking can be present throughout all fiscal capacity segments. With earmarking a certain part of a fiscal revenue capacity segment is linked to a certain part of a fiscal spending capacity segment.

2.3. Fiscal Autonomy

How does fiscal capacity relate to fiscal autonomy? The problem here is that fiscal autonomy is not defined uniformly in the literature (e.g., Gomes, 2012) and that it has different dimensions (see, for example, Zgaga, 2023b). It can mean the independent power to tax, based on co-ownership of tax bases. In that case, the higher the ATC, the more autonomy. It can also mean the ability to independently cover expenditure, i.e., revenue adequacy (do ATC and ABC provide sufficient means for ASC?). It can refer to the share of autonomous revenues and spending as compared to revenue and spending associated with up- and downward funding (ATC, ABC, and ASC in relation to TBRC and TSC). It can also refer to discretion regarding specific revenue and expenditure issues (i.e., institutional autonomy, such as the right to set own tax rates, the right to decide whether certain revenues are earmarked or not, the absence of conditionality for intergovernmental grants, etc.). Also, with borrowing (ABC) there can be differences in autonomy: For example, can federal borrowing be backed up by federal guarantees (i.e., future revenue on the federal budget) or does it have to be backed up by the units?

3. Revenue Capacity and the EU Budgetary Galaxy

Based on the previous section, this section analyses the actual revenue capacity the EU has on- and off-budget. First, the focus is on the EU's OR and the question of whether they constitute EU taxes or not (Section 3.1). Subsequently, the use of on-budget funds and assigned revenue is discussed (Section 3.2). Then, the focus will shift to the off-budget domain. Section 3.3 deals with off-budget funds based on transfers. Section 3.4 discusses similar funds and instruments based on borrowing. Finally, Section 3.5 addresses the NGEU: off-budget borrowing, that is however partly used on-budget.

The review in this section is based on literature and document analysis. The main literature and policy documents used are referred to in the text. Use has also been made of Begg et al. (2022) and Crowe (2017), and additionally of a very large number of legislative documents and various websites (especially for Sections 3.3–3.5). No reference is made to these sources for reasons of conciseness and readability.

3.1. Own Resources: Autonomous Tax Capacity or Transfer-Based Revenue Capacity?

The *Future Financing of the EU: Final Report and Recommendations of the High Level Group on Own Resources*, henceforth Monti report, defines OR as "revenue allocated irrevocably to the Union to finance its budget and accruing to it automatically without the need for any subsequent decision by the national authorities" (High Level Group on Own Resources, 2016, p. 20). The decision to allocate resources to the EU (the own resources decision [ORD] usually revised with each new MFF) requires unanimity in the Council and ratification by all MSs. After ratification, the revenue is "owned" by the EU. According to the report, this type of decision is very similar to a central government attributing some fiscal revenue by means of intergovernmental grants to sub-national levels of government. The report further

argues that OR do not constitute EU taxes because, based on its reading of the TFEU, within the EU tax competencies remain with national authorities and the EU does not have the power to levy taxes. In this view, all OR are thus in the TBRC segment. The report also argues that what would deserve to be called a real EU tax would be decided and levied by the EU, and the rates would be set by the EU legislative authority. The revenue would a priori (and not after ratification) accrue to the EU budget. The report argues that the TFEU does not allow this possibility and the EU would first have to be granted the power to levy taxes. It considers such a treaty change not realistic or viable, and it, therefore, refrains from proposing such a step (High Level Group on Own Resources, 2016, p. 24).

At the same time, the Monti report argues that MSs should register in their own budgets all revenue that will be transferred to the EU as attributed revenue ("reserved" as being "owned" by the EU), rather than as expenditure (as would be the case with intergovernmental grants). The report also discusses the extent to which some OR are more "owned" by the EU than others. Are the TOR, for example, more owned by the EU than other OR? The TOR, which for 99.9% are made up of custom duties, cover 12.8% of the 2023 EU budget (Definitive adoption of the European Union's annual budget, 2023, p. 44). The Monti report defines these TOR as follows:

> In short, TOR are fiscal resources levied on companies and/or individuals, whose proceeds are attributed directly to the EU even if the collection is done at national level. This "right of access to the source of taxation," which involves independence from decisions of MSs—also called financial autonomy—is considered essential to qualify as an OR in the literature. (High Level Group on Own Resources, 2016, pp. 22–23)

In our view, this means that the TOR are taxes and represent ATC. That the actual levying is done by MSs is indeed not relevant. History is full of examples where actual tax levying has been outsourced to tax collectors. In the case of the European Coal and Steel Community, taxes on coal and steel production were levied by regional banks (Breuer, 2023). In addition, it is the EU that decides the base and the rates of the customs duties (based on its exclusive competencies in these fields), and the right of access to the source of taxation is exclusive to the EU. In the terminology of Table 1, the TOR are thus clear examples of autonomous federal taxes, with ownership of the tax base at the federal level, as well as decision-making at the federal level. Although the Monti report also takes the position that the TOR are exclusively owned by the EU, it refrains from calling the TOR EU taxes and prefers the continued use of the term OR. While this position is defendable given a certain reading of the TFEU and especially in light of the crucial role the Monti report gives to the ORD, the report also explicitly refers to "the sensitivity of the word 'tax,' and…the quality attached to it as one of the last expressions of sovereignty" (High Level Group on Own Resources, 2016, p. 20). Moreover, according to the report:

> Thus, talking about an "EU tax" or mislabelling the EU's own resources as EU taxes without further specification may not only be incorrect from a legal point of view, it fuels suspicion and incites criticism towards any attempt to reform the system of own resources by making policy makers and citizens believe that there is a hidden agenda behind such reform. (High Level Group on Own Resources, 2016, p. 20)

While acknowledging—but not necessarily agreeing with—some of the legal nuances as discussed in the Monti report, we find this position to be overly restrictive and counterproductive to a real debate on the nature of EU revenue capacity.

How about the VAT transfers, which finance 12.3% of the 2023 EU budget (Definitive adoption of the European Union's annual budget, 2023, p. 44)? Here we have a so-called call-up rate (0.3% for the 2021–2027 period, but higher in earlier periods) which is applied over the harmonised VAT resource base. Even though the VAT base as such is heavily harmonised, some differences still exist between MSs. These differences contribute to the need to design corrections for a more harmonised VAT resource base. For 2021–2027, these corrections are to be kept at a minimum, correcting MSs' VAT base only in the few cases foreseen in the TFEU and for infringements to the VAT directive. The Monti report also argued in favour of simplification, in line with many earlier proposals for a consolidated or moderated VAT resource, but also here insists on calling the VAT transfer an OR rather than a tax and uses the term revenue sharing. In our view, the VAT transfers are an example of tax sharing, more precisely of joint taxation, and constitute ATC (similar to the TOR). The call-up rate is decided upon jointly by the federal level and the units (through the ORD and its ratification), with MSs being free (within the limits of the VAT Directive) to set their own rate(s). The fact that the VAT call-up rate is not decided upon unilaterally at the federal level is not prohibitive for the tax nature of the shared and joint VAT. Intergovernmental decision-making can go hand-in-hand with supranational taxation, as the example of the European Coal and Steel Community shows (Breuer, 2023). Moreover, some sort of representation of units in federal decision-making is prominent in many federations, but that does not turn the (federal or shared) taxes involved into intergovernmental transfers.

The VAT resource has been reduced in magnitude in favour of the more general gross national income (GNI) contributions (i.e., the contributions based on the GNI of MSs). To some extent, this was due to administrative complexities which were exacerbated as a result of UK rebate corrections. The most important argument

against relying too much on the VAT resource is that a VAT is often perceived as being regressive (for a critical analysis of this view, see Thomas, 2022). Moreover, GNI contributions are thought to reflect better a country's economic capacity to contribute to the EU. Within the OR system, the GNI contributions (which finance 64.0% of the 2023 EU budget; Definitive adoption of the European Union's annual budget, 2023, p. 44) serve as a balancing resource, financing spending not covered by other revenues. Commonly, they are considered to be transfers and not taxes. Following our scheme, they constitute TBRC, not ATC. In this context, the Monti report emphasises the fact that both the VAT resources and the GNI contributions do not flow from any common policy. While this is debatable for the VAT anyway, because of its clear links to the functioning of the common market, the argument in general does not hold. What is the direct link in a nation-state between a personal income tax and national policies? As stated in the previous section, a tax does not have to be earmarked or linked to a policy field, in order to be—or to be called—a tax.

The ORD and MFF 2021–2017 have introduced a new OR that finances 3.8% of the 2023 EU budget (Definitive adoption of the European Union's annual budget, 2023, p. 44): the non-recycled plastic-based resource, or plastics own resource (i.e., national contributions based on the amount of non-recycled plastic packaging waste). A uniform call rate of €0.80 per kilogram is applied to the weight of plastic packaging waste that is not recycled, with a mechanism to avoid excessive contributions from less wealthy MSs. This OR is closely linked to the EU policy priorities, encouraging MSs to reduce packaging waste and stimulate Europe's transition towards a circular economy, part of the European Plastics Strategy. This OR has all the elements of a regulatory environmental tax and includes a base that is exclusive to the EU as well as, through the ORD, joint decision-making. It therefore is a coordinated federal tax and represents ATC.

One of the typical features of the EU budget is that it is both a budget for states and for citizens (Crowe, 2020). This is also reflected on the revenue side and that means we have to stretch our ideas a bit about who the taxpayers are in the EU context. The TOR have individual taxpayers (such as companies and citizens). A further revised VAT resource that would go even more in the direction of a true EU rate in addition to national rates would also have individuals as taxpayers. The plastics OR, however, has MSs as taxpayers. Stretching it a bit further, we could even conceive of the GNI contributions as an EU income tax, with MSs as taxpayers. It is exclusive to the EU, and the federal level and the units co-decide on its level, i.e., it is a coordinated federal tax.

To sum up, when we look at the core features of the current OR through the framework developed in the previous section, these OR are part of the EU's ATC. The TOR are exclusive EU taxes; the VAT resource is a shared tax. If we allow for the possibility of two types of taxpayers (individuals and MSs), the GNI resource and the plastics resource can be looked upon as being exclusive EU taxes.

3.2. Assigned Revenue and On-Budget Funds

The EU budget is not only financed by OR but has revenue from a variety of other sources as well which cover 7.1% of the 2023 EU budget (Definitive adoption of the European Union's annual budget, 2023, p. 44). These sources are brought together in the budget under the main heading of "miscellaneous" revenue, scattered over titles three to six of the budget. They consist of administrative revenue, interest, revenue from fines, and revenue related specifically to Union policies. Some of this revenue is so-called internal assigned revenue and is linked to the supply of goods, services, or products by the EU (e.g., revenue from the selling of EU publications is assigned to expenditure for the production of these publications). This earmarking is an exception to the general budgetary principle of universality (Regulation (EU, Euratom) 2018/1046 of the European Parliament and of the Council of 18 July 2018, 2018, Article 22.3). Next to internal assigned revenue, there is external assigned revenue (EAR; Regulation (EU, Euratom) 2018/1046 of the European Parliament and of the Council of 18 July 2018, 2018, Article 22.2).

One type of EAR is contributions from third countries. They come in various types. First, there is a contribution linked to the Withdrawal Agreement for the UK. Secondly, there are contributions linked to the European Economic Area (EEA), from European Free Trade Area members Norway, Iceland, and Liechtenstein. EEA contributions to the operational costs of EU programmes are calculated using a "proportionality factor" (Agreement on the European Economic Area, 1994, Article 82.1). This factor is based on the relative size of the GDP of the countries concerned compared to the total GDP of the EEA and is calculated annually. It is applied to all EU budget lines that have EEA relevance. This contribution to the EU operational costs represents the largest part of the EEA contributions. EEA states also contribute to the administrative costs of the EC, but this contribution is negotiated individually for each programme on an annual basis; it is both financial and in kind. EEA contributions are centrally collected by the EC's Directorate-General for Budget and redistributed among the relevant directorates-general. Thus, the contributions are clearly earmarked. An important principle of EEA contributions to the EU budget is that they are additional to it and do not lead to a lowering of contributions of EU MSs based on GNI. The result of European Free Trade Area participation is thus an increase in programme funds compared to the initial amounts as decided upon in the context of the MFF. Thirdly, there are earmarked contributions from a large variety of other non-EU countries to specific programmes (e.g., Horizon Europe, Erasmus+, International Security Fund, EU Global Navigation Satellite Systems, Programme for

Competitiveness of Small and Medium-Sized Enterprises [COSME], European Solidarity Corps, Visa Information System, and Schengen Information System). Here, Switzerland, Israel, and Turkey are the main contributors (for details, see European Court of Auditors, 2021). Fourthly, some of the EU decentralised agencies receive direct contributions from non-EU countries, as does the European Institute for Innovation and Technology (an independent EU body).

Another example of EAR concerns the Innovation Fund. This fund supports investments by poorer MSs in the decarbonisation of their energy sectors and the increase of their energy efficiency. The programme is administered by the European Climate, Infrastructure and Environment Executive Agency and project management of the fund has been delegated to the European Investment Bank (EIB). The expenditures (approximately €3 billion in 2023) will be financed by the auctioning of 2% of the total allowances for 2020–2030 under the EU Emissions Trading System (ETS) and from additional allowances transferred by some beneficiary MSs. A similar construction and funding mechanism is used for the Modernisation Fund (MF), which is the off-budget pendant of the on-budget Innovation Fund and has the same objectives (see Section 3.3). Whereas the Innovation Fund is run by the European Climate, Infrastructure and Environment Executive Agency, the MF is run by the beneficiary MSs in close cooperation with the EC and the EIB.

More generally, the general EU budget makes use of on-budget funds in a variety of areas. One example is the European Development Fund. Until its incorporation into the EU's general budget in 2021, the European Development Fund was funded outside the EU budget by the EU MSs based on specific contribution shares or keys which were subject to negotiation. The European Development Fund keys were, thus, different from the EU budget key, reflecting the comparative interests of individual MSs in this policy area. Now, European Development Fund expenditure is covered by general revenue as well as EAR (in the ex-ante budgetary phase often estimated as *pro memoria*). For example, the same applies to the European Defence Fund. Such on-budget funds are often used to supplement or co-finance MSs' expenditures.

How can we fit in these examples of assigned revenue? They represent a mix of sources. Some of the assigned revenue is related to the exchange of goods and services (quid pro quo) which does not really represent revenue capacity unless it comes with considerable profits. Some assigned revenue can be looked upon as examples of TBRC. The EEA contributions to some extent resemble the regular GNI contributions of EU MSs. Revenues from the sale of ETS allowances, which now largely feed into ETS MSs' budgets, are under consideration as potential new OR, but they are already used as earmarked revenue for the EU budget—at least partly and outside of the OR-funded MFF—and for the off-budget MF.

3.3. Off-Budget Funds and Facilities, Based on Transfers

Within the EU budgetary galaxy, we find some off-budget funds, funded by (a selection) of EU MSs, sometimes supplemented by third countries. In some cases, these off-budget are linked to the EU budget, in the sense that the EU budget contributes to these funds, as shown in Table 2.

The EU Trust Funds are part of the EU's external actions: the Madad Fund, the Bêkou Fund, the EU Trust Fund for Colombia, and the EU Emergency Trust Fund for stability and addressing root causes of irregular migration and displaced persons in Africa. These funds are financed by contributions from the EU budget, from MSs and from third countries. The set-up of the Facility for Refugees in Turkey is similar to these trust funds but does not include contributions from third countries. Plans to

Table 2. Off-budget funds based on transfers.

Off-budget fund	Involved parties	Role of involved countries	Role of EU budget
EU Trust Funds	EU MSs and third countries	Direct contributions	Contributions
Facility for Refugees in Turkey	EU MSs	Direct contributions	Contributions
MF	MF members (Bulgaria, Croatia, Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, and Slovakia)	Funded by the sale of ETS Transfer to the MF of additional allowances by some MF countries	None
Single Resolution Fund	Banking Union countries	Funded by private sector contributions Guarantee by ESM; backstop by Banking Union countries	None
EPF	EU MSs	Direct contributions	None

create a trust fund for the post-war reconstruction of Ukraine were presented in 2022 but have not yet been followed up.

The Single Resolution Fund is an odd one out, as it is financed by private banks across the 21 Banking Union countries. The Single Resolution Fund as such is not private but is owned by the Single Resolution Board, an independent EU agency. The so-called backstop is an emergency fund that can be used to double the size of the Single Resolution Fund if needed, by means of transfers from Banking Union countries (but to be repaid later by the private sector).

The EPF, established in March 2021, is meant to finance all external Common Foreign and Security Policy actions in military and defence areas. It finances the common costs of military Common Security and Defence Policy missions and operations (including support of such activities by other organisations) and provides capacity-building support to third countries (such as assistance measures). It replaced the Athena Mechanism and the African Peace Facility. Contributions to the EPF are determined based on a GNI distribution key. The EPF originally had a financial ceiling of close to €6 billion for the 2021–2027 period, with an annual ceiling going up from €420 million in 2021 to €1.1 billion in 2027. As the EPF is currently the prime vehicle for support to the Ukrainian armed forces, it has been topped up in 2023 by €2 billion, with the possibility of an additional top-up of €3.5 billion until 2027.

3.4. Off-Budget Funds, Facilities, Instruments, and Mechanisms, Based on Borrowing

Whereas the EU cannot borrow to balance its budget, it has the competency to borrow to support its policies. In other words: Borrowing is allowed, but not to cover a (ex ante) on-budget deficit. This means that in the case of the EU, ABC (in Figure 2) is non-existent; borrowing by definition is part of off-budget revenue capacity. A large part of the borrowing and lending activities of the EU has traditionally been in the hands of the EIB, often referred to as the second financial arm of the EU. The EIB is the world's largest multilateral borrower and lender. Shareholders are the 27 EU MSs, which have a share in the EIB's capital based on the size of their GDP at the time of accession to the EU. In addition to paid-in capital, the EU MSs have committed to uncalled capital. The EIB is authorised to have maximum loans outstanding equivalent to 2.5 times its subscribed (i.e., paid-in and uncalled) capital. The EIB provides the EU with a lot of financial capacity, but this capacity is placed within a banking domain and is therefore essentially non-fiscal in nature.

The InvestEU Fund combines the European Fund for Strategic Investments and 13 other—formerly independently managed—EU financial instruments. It aims at projects in four main policy areas: sustainable infrastructure; research, innovation and digitisation; small- and medium-sized enterprises; and social investment and skills. It supports the use of a wide range of financial products (equity, debt, and guarantees) by the EIB and other implementing partners, by means of guarantees from the EU budget and from EU MSs.

Table 3 also lists two well-known stability mechanisms developed in the aftermath of the financial crises. First, there is the European Financial Stabilisation Mechanism, which can be used to provide financial assistance to any EU country experiencing or threatened by severe financial difficulties. Secondly, there is the ESM, which has the same function and is the default option for support to eurozone countries. Thirdly, the (medium-term) Balance of Payments (BOP) facility concerns non-EMU MSs only and aims at supporting countries that face difficulties in their balance of current payments or capital movements by means of granting loans. Fourthly, Macro-Financial Assistance (MFA) is the EU-external counterpart of the BOP facility. MFA is used as a complement to International Monetary Fund financing. To a large extent, BOP and MFA support are about back-to-back loans where the EC uses its standing in the capital markets to provide third countries with highly concessional loans.

In November of 2022, the EU established MFA+ for Ukraine, following earlier MFA programmes (MFA I–IV,

Table 3. Off-budget capacity based on borrowing.

Off-budget fund/instrument	Bond issuance	Guaranteed by
EIB	By EIB	Paid-in and uncalled capital of EU MSs
InvestEU	—	EU budget and EU MSs
European Financial Stabilisation Mechanism (for all EU MSs)	By EC	EU budget
BOP facility (for non-EMU countries)	By EC	EU budget
ESM (for EMU countries)	By ESM	EMU MSs
MFA and MFA+ (Ukraine)	By EC	EU budget (External Action Guarantee) MFA+, with additional guarantees by EU MSs
SURE	By EC	EU budget and EU MSs

MFA in the context of the Covid-19 pandemic in 2020–2021, and Emergency and Exceptional MFA in 2022). MFA+ is more comprehensive than regular MFA. It includes a subsidy on the payment by Ukraine of interest on the loans, which is paid from by the EU budget, through EU MSs contributions in the form of EAR. MSs as well as third countries have the possibility to provide additional contributions as EAR to the EU budget, which will then feed into the use of the MFA+. Because the 2021–2027 MFF ceilings do not allow for the additional guarantees needed for the MFA+ borrowing, guarantees by MSs back up the borrowing by the EC.

The Support to Mitigate Unemployment Risks in an Emergency (SURE) is a loan instrument established in 2020 to support EU MSs in their (short-term) efforts to secure jobs and incomes during the Covid-19 pandemic. It is an off-budget emergency loan supplement to grants based on longer-term support by means of the on-budget European Social Fund. SURE represents the first large-scale borrowing scheme by the EU, far beyond back-to-back loans.

3.5. Next Generation EU and the Recovery and Resilience Facility: Off-Budget Borrowing, Partly Used On-Budget

Last but not least, there is NGEU, funded by borrowing by the EC, with a guarantee from the EU budget (using the 0.6% GNI unused headroom under the increased OR ceiling). NGEU is implemented through the Recovery and Resilience Facility (RRF) that supports concrete reforms and investments in EU MSs as part of their national recovery and resilience plans. RRF uses two types of instruments: loans (€385.8 billion) and grants (€338 billion). In addition, a small part of the NGEU funds are used to reinforce several existing EU programmes. Loans, which will remain off-budget, will be repaid by the EU MSs. Grants will be paid from the EU budget. To that end, the grant and reinforcement parts of NGEU are brought on budget as EAR. These parts will have to be repaid out of the EU budget as soon as repayment of the NGEU borrowing starts (2028 up until 2058), but these repayments should not crowd out other expenditures which could result in the need to find new additional revenue to fund the EU budget.

4. Discussion and Conclusions

The Irish philosopher and politician Edmund Burke stated, in his observations on the French Revolution, that "the revenue of the state is the state" (Burke, 1790, p. 188). The previous section has provided an inventory of various types of revenue capacity the EU currently has, both on-budget and off-budget. The picture that emerges from that inventory is at odds with the widespread perception of the EU as a wanting fiscal entity that lacks real fiscal sovereignty, that has no or limited powers to tax and that cannot borrow to finance its own budget (e.g., Cipriani, 2014, pp. 7–8; Farri, 2023, p. 86; Lindholm, 2023, p. 4; Zgaga, 2023a, pp. 704–706). Following Burke's reasoning, in this view, the EU is perceived as an entity that lacks its most state-like feature, i.e., autonomous revenue. The actual situation is, however, one where the EU does have ARC consisting of both ATC and ABC. Five major conclusions can be drawn regarding this revenue capacity.

First, off-budget intergovernmental resource pooling is rather prominent in the EU budgetary galaxy. This is done in many ways: by means of MSs' and third countries' contributions to off-budget funds, through pooling of resources as special EAR to the EU budget, and by means of guarantees to back-up borrowing. This has been part and parcel of EU finances for decades and is obviously linked to the preferences of MSs for intergovernmental arrangements in certain policy fields. This is, therefore, not new and not at all Hamiltonian, but these preferences can change over time, as the 2021 incorporation of the European Development Fund into the general EU budget shows. An interesting avenue for further research would be to study the advantages and disadvantages of off-budget operations from the perspective of the different EU institutions involved and compared to on-budget finances.

Secondly, ABC is off-budget capacity. This is related to treaty constraints regarding borrowing: Borrowing is not allowed to cover on-budget expenditure as this should always be covered by OR, with the GNI contributions as a balancing resource. This has led to a major role for the EIB, in financial transactions that otherwise would—or at least could—have been incorporated into the EU budget and would then have had a fiscal nature. Although the focus of this article was on the EU budget and its "galaxy" and not on the second financial arm of the EU, the EIB and its capacity to co-shape EU policy should be taken into account when discussing fiscal capacity. In addition, off-budget funds and mechanisms based on borrowing such as the ESM, the European Financial Stabilisation Mechanism, the BOP facility, regular MFA, and MFA+ also constitute significant borrowing capacity, as does SURE. The development of this capacity can be called quasi-federalisation (Woźniakowski, 2022, p. 100). This is the EU's way of federalisation of its borrowing capacity, given treaty constraints.

Thirdly, NGEU and the RRF provide a bridge between the off-budget world of EU borrowing and the no-borrowing-allowed world of the EU budget by using EAR for the grants part of the schemes. Even though this construction is artificial as a result of treaty constraints, it de facto means that the EU borrows to finance its regular expenditure. This perception, of course, rests on the assumption that NGEU/RRF spending is regular—rather than exceptional—and that this spending finally brings the overall EU finances to a level that lives up to its responsibilities. If there is something Hamiltonian about the NGEU, then it is exactly that (see also Woźniakowski, 2022, p. 43, referring to *The Federalist Papers*, paper no. 31). If one looks at NGEU and RRF spending as

exceptional, temporary, and mainly done at the MS level, just facilitated by the EU, then NGEU is not Hamiltonian. In that view, as Cannizzaro (2020) has put it, NGEU has just made the EU into a debt agency for its MSs, without any real change in fiscal power.

Fourthly, the EU has a de facto power to tax, in the form of customs duties, a shared VAT, and a plastics tax. Also here, treaty constraints play a role: An artificial route has to be followed every seven years to confirm this de facto power through the ORDs. For example, we have the weird situation that there have been autonomous tax revenues from customs duties (common tariffs) since 1968 as part of the Common Commercial Policy. But this tax has had to be acknowledged in the ORDs of 1970, 1985, 1988, 1994, 2000, 2007, 2014, and 2020, each time resorting to the safe label of OR rather than admitting the existence of EU taxation. This reluctance to use the term "tax" in relation to the EU is also detrimental to a proper discussion of future funding of the EU budget. As part of the decision-making on the MFF 2021–2027, new possible revenue sources have been put forward. In addition to resources based on the Carbon Border Adjustment Mechanism and resources based on a revision of the ETS, a digital levy, a resource based on the reallocated profits of very large multinational companies, a resource based on the Financial Transaction Tax and a resource linked to corporate income taxation have all been mentioned. Even though the status of some of the proposals is not clear, as they coincide with decision-making on Pillars 1 and 2 of the Base Erosion and Profit Shifting framework of the Organisation for Economic Co-Operation and Development, it is obvious that such revenues concern EU taxes. They should not be presented as intergovernmental transfers that provide "own resources" to the EU or as resources that are "based on" such taxes.

Finally, the nature of the EU as a federal union (i.e., a federation by aggregation of previously independent units; Fabbrini, 2019) obviously has an impact on the availability of suited candidates for EU taxes. Some of these potential resources concern rather small tax bases and are "fringe taxes," just as the plastics own resource is. This is because those taxes that produce larger amounts of revenue, that are stable, that have a low excess burden, that can relatively easily be administered et cetera (i.e., that satisfy all the requirements listed in all the reports that have tried to find revenue sources for the EU), are already in use by nation states, and often have been so for centuries. Tax sharing is then a smart option and could, in addition to the VAT, for example, be applied to corporate income taxation and energy/carbon taxation (EC, 2010). The Financial Transaction Tax would also be suited for tax sharing.

Acknowledgments

The author would like to thank the participants of the workshop on comparative fiscal federalism and the EU, at the Department of Political Science, LUISS University, Rome (March 2023), as well as the anonymous reviewers of the draft article, for their comments.

Conflict of Interests

The author declares no conflict of interests.

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