Why net operating balances are a distorted indicator of a Member State’s benefit from the EU budget

KEY FINDINGS

Operating budgetary balance (OBB) calculations imply that EU spending is a zero-sum game. This feature is inconsistent with the main argument that EU spending creates European added value. Thus, taking simple net operating balances as an indicator of a Member State’s ‘net benefit’ from the Union’s fiscal activities can lead to misleading results, as demonstrated in the following points of argument.

Firstly, spending at the EU level can have more added value relative to spending at the Member State level due to economies of scale (i.e. cheaper provision of a public good at the central level) and threshold effects (i.e. failure to provide a desired public good at the Member State level due to budget constraints). Similarly, added value for the Union can be created from cross-border effects of EU funds. Such positive externalities arise due to (knowledge) spillovers and second-order effects of higher cross-border trade, or investment stemming from the original beneficiary Member State.

Secondly, certain types of EU spending, such as external spending, are not allocated to Member States directly and are therefore completely absent from Operating budgetary balance calculations. External spending can potentially benefit all Member States (through e.g. increased trade, reduced migration costs).

Thirdly, even if funds can be allocated with reasonable certainty to a recipient that is situated in a Member State, it is not obvious which Member State bears the full economic rents from these funds in practice. For example, a significant amount of Cohesion funds flowing to economically lagging regions proceed to multinational enterprises with headquarters in other Member States, and within these firms the rents are further shared between capital and labour originating from different Member States. Thus, the benefits of a fund do not necessarily remain in the assigned country fully; yet Operating budgetary balances subscribe all fund benefits to the Member State to which the payments are made.

Fourthly, EU transfers have historically helped the European community reach important integration bargains. For example, the Cohesion Fund was used as an important tool to reach unanimity on the Maastricht Treaty. Deep integration steps, made possible by EU spending, benefit the Union as a whole but are not reflected in Operating budgetary balances.

Finally, although Operating budgetary balances are based on (parts of) the core EU budget, the EU has several additional instruments (e.g. European Investment Bank, European Stability Mechanism). These additional instruments are economically significant but are in no way reflected in operating budgetary balances.
Net operating balances must be interpreted with great caution

In a yearly exercise, the European Commission calculates and publishes operating budgetary balances (OBBs) for all EU Members States in its Financial Report on the EU budget.\(^1\) The interest in this indicator dates back to at least the 1980s when the UK started complain about an alleged ‘budgetary imbalance’. Since then, it has become a habit of policymakers, political parties, the media and interest groups to assess a Member State’s ‘gain’ from EU spending with a prominent and sometimes sole focus on this net balance. Operating budgetary balances simply compare a country’s own resource payments to the identifiable backflows (i.e. allocated expenditure). The Commission never publishes Operating budgetary balance calculations without first emphasising the caveat that this indicator is ill-suited as a measure of a Member State’s benefits of EU spending.\(^2\)

These caveats are very significant. Firstly, the precise construction of Operating budgetary balances has properties that lead to misleading conclusions. For example, Operating budgetary balances are arithmetically constructed, and its own resource payments are artificially scaled to precisely equal the allocated expenditure, thus resulting in zero. Hence, this indicator implicitly assumes that the distribution of benefits from EU spending follows the logic of a zero-sum game (see Briefing on “The net operating balances: Variants, emerging numbers and history). Secondly, many potential benefits from EU membership cannot be measured based on budgetary data. This is the case, for example, for the Single Market that has increased growth and employment; or for the impact of environmental, labour safety and consumer standards on the wellbeing and health of citizens (see Briefing on “The benefits of EU membership are not measured by net operating balances”).

This briefing sheds light on one specific point of critique: Operating budgetary balances are not a reliable indicator of a Member State’s benefit from the Union’s expenditures.

No coverage of European added value

The first fundamental shortcoming originates from operating budgetary balances’ zero-sum game property. By definition, all of the positive and negative net balances of Member States cancel each other out. This feature leaves the Operating budgetary balance indicator fully incapable of detecting any added value from EU spending. The very idea of an EU budget is that it should foremost finance those policies that provide a higher benefit than national spending, hence producing a ‘positive-sum outcome’. European added value (EAV) can originate from different possible sources, as listed below.

**Economies of scale:** The EU provision of specific tasks may be cheaper than the national due to economies of scale. Case study 1 and Figure 1 describe such potential economies of scale using the example of EU external representations.

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Case study 1. The potential economies of scale from EU external representations

Economies of scale should also be considered in the search to improve EU spending. For example, researchers have considered the extent to which replacing national embassies and consulates with European ones will help Member States save money. For small countries, in particular, financing external representations around the globe can be a fairly costly exercise in per capita terms.

Compared to national provision, joint EU embassies ‘with 27 flags’ could reap considerable economies of scale. Figure 1 quantifies this potential cost savings – without any deterioration of service (i.e. keeping staff for all languages) nor regional coverage – to be between 35% (cautious scenario) and 64% (optimistic scenario) of the total national spending.
Brexit provides another example. A single European Commission Directorate-General provides Member States with a service that all individual national ministries would otherwise have to provide. Following the UK’s decision to leave the Union, the UK set up a new ministry, the Department for International Trade. The administrative costs of this new institution are a (negative) indicator of the economies of scale of EU activities. The remaining Member States save the equivalent annually – but these savings do not show up in any Operating budgetary balance statistics.

Threshold effects: Europeans might be able to fund activities and generate benefits from the EU budget that would simply not materialise at the Member State level. Large scale public projects with high fixed costs involve funding requirements that may exceed the financial capacity of individual Member States (i.e. threshold effects). A potential example of a public good that might be subject to such threshold effects is Galileo, the European global satellite navigation system, which is out of the financial reach of any, even the largest, Member State alone.

Overcoming policy failure due to cross-border externalities: Member States will typically underprovide certain policies if there are significant cross-border benefits from national spending. EU policies financed from the common budget help to overcome this policy failure. Investing in the reduction of cross-border pollution is a good example of the creation that is more likely to emerge with EU funding than without (see Briefing on “The benefits of EU membership are not measured by net operating balances”).

Of course, it cannot be taken for granted that any EU activity actually has a positive European added value just because the EU budget funds it. Some types of spending reflect the history of European integration or the power of European vested interests rather than the focus of EU spending on added value. However, it is undisputed that Operating budgetary balances are hardly a helpful indicator to detect policies with a significant European added value. Rather, the contrary is true: the preoccupation with Operating budgetary balances may continue to put certain low European added value spending policies (e.g. direct payments to farmers) in a seemingly favourable light.
The Operating budgetary (OBB) balance blindspot: Cross-border effects and externalities

One argument for spending at the EU level is that countries benefit from spending in other Member States. Two channels are particularly relevant from this cross-border perspective: **first, (knowledge) spillovers** stemming from EU-financed Horizon 2020 (H2020) research projects, for example; and **second, increased economic activity in the receiving country**, which can have beneficial repercussions for other Member States (i.e. higher trade, investment).

**H2020 – the instrument which provides the EU’s research and innovation (R&I) funding – has impressive results to offer.** Since 2014 close to 26,700 grants with an overall value of €48.75 billion have been signed. The programme has already led to over 2,000 reported intellectual property right applications (i.e. patents, trademarks) and more than 117,000 scientific publications. Case study 2 describes an example of a successful EU-financed discovery in quantum technologies.

H2020 funding is granted to research organisations and companies throughout Europe. Operating budgetary balance calculations only take it into account as a backflow into the country hosting the (estimated part of the) project. **However, R&I outcomes of these projects are not restricted to these countries and are in fact used internationally.** This type of knowledge and innovation spillover is therefore yet another factor that fails to take the Operating budgetary balance approach into account and negates the idea of equating net contributors with net beneficiaries of the EU more broadly in the Operating budgetary balance sense.

Regarding the positive cross-border externalities due to increased trade between Member States, the line of argumentation is very similar as in the preceding section. **An EU-financed infrastructure project might, to some extent, lead to the employment of new workers and the accumulation of capital in firms.** However, this is not due to the firm’s direct involvement in building a new freight yard or airport, but rather because **this new infrastructure will stimulate economic activity in its region and attract foreign firms as investors or trade partners more indirectly.**

**Disregarding national benefits from EU spending outside of the EU**

Since Operating budgetary balances only account for allocated expenditure that is identified based on payment to a Member State, the EU’s external spending is excluded. Thus, **the peculiar and hidden assumption of any Operating budgetary balance calculation is that EU spending outside of the EU does not create any benefit for Member States.** This is another highly critical shortcoming of Operating budgetary balances.

**An important example is development aid.** EU institutions and Member States both support less developed countries via financial flows (i.e. loans or grants to support economic development and welfare) and technical cooperation. In particular, the European Development Fund (EDF) is financed by Member

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**Case study 2. Quantum Opto-Electronics**

This project, funded by the European Research Council between 2009 and 2013, was described as a potential milestone in physics. Project researchers at the Delft University of Technology proved the existence of the ‘Majorana fermion’, a particle which was first theorised in the 1930s. The discovery of this particle is applicable in the design of high-speed quantum computers. The research outcomes were selected by *Nature Physics* to be among the top 10 physics discoveries of the last decade. This prestigious title underlines the far-reaching impact of this exemplary EU-financed project in quantum technologies.

Source: European Research Council, “*ERC-funded result amongst top 10 physics discoveries of the last decade*”, 15 March 2016.
States’ direct contributions. The EDF is currently excluded from the EU budget, though its inclusion in the next Multiannual Financial Framework (MFF) is being discussed. During the 2014-2020 round about €66 billion (equivalent to 6% of MFF) is spent on the EU policy area ‘Global Europe’, which together with EDF contributions add up to a significant spending of about €100 billion. The majority of these funds are distributed to non-EU countries to support development and international cooperation, provide humanitarian aid or set up pre-accession programmes to future EU candidates. On the one hand, development aid can be seen as a humanitarian obligation that reflects values of global solidarity. On the other, a successful aid that stabilises the economic, political and security situation in the receiving country also creates benefits for the contributor (e.g. increased trade with the recipients, reduced immigration pressure, higher security, lower likelihood of terrorism, EU-based enterprises developing projects abroad).

Case study 3 quantifies potential benefits from development aid and estimates the national shares from these benefits. It shows that the potential monetary (e.g. higher trade, lower costs of forced migration) as well as non-monetary (e.g. increased political stability and security) benefits from EU development spending are entirely ignored in Operating budgetary balance calculations.

Development aid is also an example of a purely national contribution potentially resulting in underperformance. A particular feature of the benefits of development spending (e.g. political and economic stability in the European neighbourhood) is that they materialise for all European countries, regardless of whether they contributed or not. Hence, Member States have an incentive to freeride (i.e. indirectly benefit from activities other countries pay for). A European approach to the joint financing of development aid can provide a European public good more efficiently. Again, Operating budgetary balances are fully blind to this type of European added value.

**Case study 3. Donor benefits from development aid**

A recent study developed a benefit indicator for development aid donors, which is based on four initial indicators. They measure each country’s share in the EU’s i) annual asylum seekers (averages over 2009 to 2014), ii) imports (averages over 2011 to 2013), iii) exports (averages over 2011 to 2013), and iv) number of terrorist attacks on a Member State’s territory and its citizens worldwide. The underlying assumption is that the higher the values of the four indicators, the more a country benefits from its own and third-party development cooperation.

Figure 2 (next page) combines these four dimensions using equal weights and depicts the composite national benefit share from development policy. The ordering of countries corresponds to the 2017 Operating budget balances, with Germany as the largest net contributor in absolute numbers. Some Member States are missing due to data availability issues. National benefit shares add up to 100% across all of the sample countries. A larger value indicates that a Member State benefits from development cooperation more than others. As shown, the traditional net contributors attract a large share of the overall benefits. From this perspective, their share in benefits from European spending tends to be underestimated in Operating budgetary balances, as these returns from common development policies are not factored in.
On economic incidence: Who is the final beneficiary of EU funds?

Even if funds can be allocated with reasonable certainty to a recipient situated in a certain Member State (see Briefing 1) – such as in the cases of the Common Agricultural Policy (CAP) and Cohesion spending – it is not obvious who exactly bears the full economic costs and benefits of these funds in reality. This question relates to ‘economic incidence’: the effective burden-sharing that cannot be inferred from payments (see Case study 4).

In the case of EU transfers, the question of whether funds allocated to a certain country remain in said country is not trivial. **One can claim with full certainty that parts of it do not. However, the question of the extent to which it will be an economic incidence depends on market conditions** (see Case studies 5 and 6).

Another important caveat to consider regarding financial flows under Cohesion programmes is that even though its projects may result in cross-border flows of profits or wages, these flows must be conceptually distinguished from transfers. Cross-border profits compensate for capital investment; wages compensate for labour input. Hence, these payments are market payments for the factors provided. These kinds of transactions are fundamentally different from pure transfers that occur through Cohesion funds, which are resource flows without market compensation from the recipient (see Case study 7).

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**Case study 4. Economic incidence and traditional own resources**

Economic incidence is an important and longstanding issue in economic analysis. Its basic insight is that formal payments are not necessarily good indicators of true burden-sharing. Traditional own resources offer a good example. Customs duties for EU imports are largely paid at major entry points like the Port of Rotterdam, in which case the payment is transferred from the Netherlands to the EU. However, this is no indication of who bears the economic burden. Effectively, the burden will either fall on the final consumer in the final destination, who has to pay a higher price; or on the foreign company that exports the good to Europe and has to accept a lower net price as a consequence of the customs.
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Either way, these two examples show that it is economically wrong to argue that a country receiving an EU transfer is the only beneficiary of that transfer. Hence, this underlines another major conceptual weakness of Operating budgetary balances as an indicator of the financial benefit from EU spending.

Case study 5. Incidence of Common Agricultural Policy payments

As with Cohesion spending, it is not obvious that CAP payments to farmers will remain within national borders. Parts of agricultural subsidies are likely to be capitalised into land prices and since land is immobile, they will remain national. Other parts of CAP payments may benefit agriculture and its labour force through higher profits and wages. The question of identifying which factors of production (i.e. land, labour, capital) benefit more from these subsidies is non-trivial and, in the jargon of economics, depends on the relative elasticities of these factors’ demand and supply. In theory, some of the beneficiaries of these payments can be local farmers or large multinational enterprises. However, our desk research on the composition of the top 10 recipients of CAP payments in Germany, Italy, Austria, Portugal, Poland and Czechia in 2018 did not find evidence that a significant share of payments go to multinational enterprises.

Notes: Data on the recipients of CAP payments was last accessed 22 January 2020 following national information collected by the European Commission. Slightly more than half of assessed projects were directly addressed to national enterprises or regional associations and the remaining beneficiaries were national agencies and ministries. A major multinational recipient could hardly be identified in any of the investigated countries.

Case study 6. The incidence of structural funds

An enterprise implementing a large infrastructural project financed by European Structural and Investment Funds may hire both local and foreign workers. This enterprise may be owned by other firms located in EU Members other than the Cohesion region. The large infrastructural project would surely benefit the economic growth of the targeted region, but the profits and wages generated during the implementation of the project would also flow to the foreign employees and owners of the implementing firm, who might reside abroad. The questions of whether the firm owners would benefit from transfers to firms through higher profits, or whether international workers benefit from transfers through higher wages are not obvious and have to do with relative forces of demand and supply. Similarly, market conditions will at least partly dictate whether local or foreign firms win the transfers.

In general, because of the relatively less developed capacities of the Cohesion regions, a significant share of their EU funds are likely to be used by firms owned by other Member States. As shown in Figure 3 (next page), the share of contract awards won by firms residing in other Member States is the lowest in Spain (1.50%), followed by the UK (2.44%), Germany (3.04%) and Italy (5.42%). This share is highest in the small country of Luxemburg (81.98%), followed by Belgium (42.65%), which hosts many EU institutions. The poorer Member States of Romania and Bulgaria rank average (16.26% and 8.69% respectively). Thus, the incidence of EU funds spent in poorer and smaller Member States tend to partly flow to larger and richer Member States. Although the magnitude of this effect is sizeable (e.g. 16.26% of EU funds procured in Romania flows to non-Romanian firms, a rate that is three times larger than that of Germany), the calculations might even underestimate this effect since subsidiaries of multinationals registered locally are not counted as cross-border firms. On the other hand, the more developed regions of Europe, with capacity-constrained firms and expensive workforce, are likely to hire employees from less developed regions to carry out these projects. Therefore, they will shift some of the rents of Cohesion spending to these regions through labour effects. Overall, this type of cross-border effect is significant, but – apart from a few countries – it does not seem to be huge.
Case study 7. Cohesion transfers versus cross-border profit and wage payments: The risk of comparing apples and oranges

Assume an infrastructure is built in *Country A*, financed by a Cohesion transfer and supplied by firms and workers from *Country B*. The final welfare-relevant outcome is as follows: *Country A* is finally endowed with a new infrastructure. *Country B*’s firms and workers have earned the profit and wages that compensates them for their service. In effect, the outcome is that *Country B*’s resources have been used to set up infrastructure in *Country A*. As such, **even if Cohesion projects induce cross-border payments that reward the service of firms and workers in third countries, this does not change the fact the official recipient is the beneficiary from a welfare perspective.**

The welfare assessment would change if resources in *Country B* are not fully used because of high unemployment during a recession, for example. However, even then, *Country B* would have a larger advantage to finance the new job-creating infrastructure at home and not abroad. It would then reap a double benefit: new infrastructure and employment.

This analysis leads to **a more advantageous welfare outcome for *Country B* only if its workers and firms earn wages and profits that are above usual market levels** (i.e. ‘pure rent’) from *Country A*’s infrastructure project. Hence, the final assessment of the welfare consequences also depends on the degree of competition in the selection of suppliers. Insofar as Cohesion projects are procured through competitive European tenders, it is unlikely that the level of rents will be significant.
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Net balances have no memory of historic integration bargains

Far-reaching EU decisions that imply Treaty changes require a broad consensus between Member States and EU institutions. The EU budget and its transfer instruments have historically helped to achieve such unanimity on important new integration steps.7 Hence, to some extent, the evolution of the EU budget and its underlying financial burden-sharing may reflect large political bargains on further integration steps. Such comprehensive bargains may potentially have huge political and economic returns (e.g., if they have paved the way for both a larger and a deeper Union). Yet, such return is not reflected in Operating budgetary balance calculations.

New integration steps (e.g., deepening of the Single Market) can be beneficial to the Union as a whole, but may not affect every Member State equally. Hence, asymmetries in the amount of benefits Member States gain from a specific integration step may emerge. In such instances, EU spending programmes can compensate the relative losers and help to reach the unanimity requirement for a new integration step (see Case study 8). In the end, it would have been hard to achieve mutually beneficial integration steps without these bargains; yet these potentially far-reaching consequences of EU transfers are not in any way reflected in Operating budgetary balance calculations.

Case study 8. A bargain with more integration for higher Cohesion spending

Regional disparities between Member States increased in the 1980s with the accession of Greece, Spain and Portugal. These and other poorer Member States were generally less favourable towards the EU’s deep integration plans – the completion of the Single Market by 1993. They feared increasing economic divergence resulting from deeper integration. Therefore, the 1986 Single European Act provided cohesion goals and structural policy competences for the European Communities. As a result of this bargain to create a fully integrated European market with all of its economic benefits, structural funds were doubled between 1987 and 1993.

The Maastricht Treaty should deepen European integration further. It was the basis for introducing the currency union, laid down the criteria to join the Eurozone, and established European citizenship with the privilege of freedom of movement and residence. The fiscal criteria to join the euro were not especially received favourably by Spain, Greece, Portugal nor Ireland. As unanimity was needed, the Cohesion Fund was added to the Treaty in exchange for their approval, which donated additional funds. Again, Cohesion money was thus part of a larger political bargain; this time for the sake of monetary integration.

Source: Heinemann, Friedrich; Tobias Hagen; Philipp Mohl; Steffen Osterloh and Mark O. Sellenthin (2010), Die Zukunft Der EU-Strukturpolitik, Baden-Baden: Nomos.
Operating budgetary balances ignore the benefits from fiscal instruments outside of the core budget

**Operating budgetary balances only take into account payments from and into the core EU budget.** However, Member States can benefit from financial instruments outside of this core budget, too. Figure 4 illustrates the growing universe of fiscal instruments as they have emerged; important examples are listed below.

The European Investment Bank (EIB) is the world’s largest multilateral lending institution and the ‘Bank of the EU’. Firms, institutions and public authorities can apply for EIB loans and benefit from favourable interest rates. To put this into perspective, total commitment appropriations of the EU budget during MFF 2007-2013 were around €976 billion, while the total amount of new EIB loans going to Member States were worth €390 billion during the same period. The European Investment Fund is part of the EIB group and mainly targets small and medium-sized enterprises. The EIB estimates an increase of €205 billion in investment, an impact of 0.9% growth of EU GDP and a million additional jobs until 2022 resulting from the activities of the EIB group of 2018 alone.

Moreover, the European Fund for Strategic Investments (EFSI) was launched in 2014 as part of the Investment Plan for Europe. The EU budget guarantees €26 billion, of which €9.1 billion are paid to the EIB. Moreover, the EIB allocates €7.5 billion directly to EFSI, as a further guarantee, from funds that are paid to the EIB from the Member States. The goal is to activate investments of around €500 billion by the end of 2020 – €459 billion has already been activated by December 2019. Operating budgetary balance calculations do not take into account these direct and indirect benefits for Member States, which are partially guaranteed by the EU budget.

The European Stability Mechanism (ESM) is a lending institution that was established during the euro area debt crisis in 2012. It provides financial assistance in the form of loans to eurozone countries, or as new capital to at-risk banks. The ESM was established as a permanent institution and replaced the temporary European Financial Stability Facility. The ESM has a maximum lending capacity of €500 billion and refinances its lending by selling bonds. The ESM enjoys financial guarantees from all euro area governments that currently total €700 billion (€80 billion are paid as liquid resources). The additional capital can be called in when necessary. As it provides financial assistance to Member States under crisis, its direct benefit is to the fiscally weaker countries. They take advantage of attractive interest rates that are often below those that these countries face in the markets. As of January 2020, it has outstanding loans of €295 billion to Greece, Cyprus, Portugal, Ireland and Spain. Insofar the ESM successfully contributes to the stabilisation of the euro area and the European economy as a whole, its activities also benefit the fiscally healthier Member States that do not require ESM support but merely provide guarantees.

Overall, these examples show that **Operating budgetary balances emit highly distorted signals of the national ‘benefit’ from European fiscal activities as an increasing share of these activities takes place outside of the core budget.**
Figure 4. EU finances: The whole picture


Conclusion

All of these arguments point in the same direction: taking the simple Operating budgetary balance (OBB) as an indicator of a Member State’s net benefit from the Union’s fiscal activities leads to highly misleading results. Of course, it is fully legitimate to apply the tools of critical cost-benefit analysis to European spending, from both European and national perspectives. However, Operating budgetary balances are definitely not the composite indicator that can serve as a reliable compass showing a Member State’s fiscal benefit from European spending.
2 Ibid., p. 72
6 This second channel is distinct from overall benefits from the EU’s Single Market. Whereas in the latter case, benefits accrue due to the scraping of trade barriers, the argument here is that EU funding improves economic conditions in recipient countries, which will have cross-border spillover effects on other Member States (see Briefing 3).

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