

# Cross-border flows operated through the EU budget: an overview

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The budget of the European Union (EU) amounts to around 1% of Gross Domestic Product (GDP) of the EU. Although financed by national contributions, only a part of expenditure flows across Member States. According to our estimates, yearly cross-border flows operated through the EU budget amount to a quarter of a percentage point of the EU's GDP. To provide a benchmark, 'cross-border' flows between US States are calculated using the same method. These are much larger in normal times and incomparably larger in deep recessions. They amounted to 1.5% of US GDP on average between 1980 and 2005, and increased to 9% over 2009 and 2010. Importantly, the post-crisis increase (2009-10) of net inflows was financed entirely by borrowing at the federal level. During normal times (1980-2005), instead, it was the size and structure of the federal budget to determine the magnitude of cross-border flows. These happen automatically and almost invisibly through the federal tax and spending system. They are not subject to intense interstate negotiations but predominantly stem from a direct fiscal relationship between the citizen – regardless of its residence – and the federal layer of government. While keeping in mind the limitations of such comparisons, the evidence gathered in this paper suggests that – contrary to popular perceptions - cross-border flows operated through the EU budget are overall fairly small in both absolute and relative terms. Notions such as 'fairness' and 'juste retour' often used in the context of past intense EU budgetary negotiations could therefore benefit from being framed in a broader, arguably more relevant, perspective.

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# 1. INTRODUCTION

The economic analysis of the budget of the European Union has traditionally attracted significant attention, with a renewed interest emerging in the wake of the late 2000s crisis and in view of the recent adoption of budgetary allocations for the period 2014-20.<sup>(1)</sup>

The literature on the subject can be divided in three broad areas: one based on the principles of fiscal federalism and focusing on expenditure allocation and revenue sources (Oates W., 1972, 2002; Beggs I. *et al.* (2008); Ecorys *et al.*, 2009), one based on the implications of euro area membership for fiscal policy integration (Kenen P., 1969; European Commission, 1977; De Grauwe P., 2009) and one more practical approach based on the history, practice and experience of other Federations (Bordo M. *et al.* (2011), Henning R. and Kessler M., 2012; Escolano *et al.*, 2015).

The purpose of this paper is to offer a quantitative contribution to the third strand of this literature by providing an estimate of the magnitude and main drivers of cross-border flows operated through the EU budget. Although the many dimensions of divergence (e.g. historical, political, fiscal, institutional, etc.) with the US and other federations are well identified in the above mentioned literature, this contribution is narrower in its scope and focuses on the estimation of net cross-border flows.

At the same time, this is performed at a greater level of detail compared to other similar studies (e.g. Mikko M., 2006; Manasse P. *et al.*, 2013). Notably, it goes beyond the country-by-country perspective and proposes a measure of cross-border flows for the EU as a whole. Second, it makes use of a richer dataset on EU budgetary execution allowing the role played by different funds and headings to be disentangled. Finally, it differentiates between 'crisis' and 'normal' times by using two different data-sets for the US.

The data-set for the EU includes information by major categories of revenue and expenditure for 2007-13. This period is long enough to smooth out annual fluctuations in budgetary implementation and has the advantage of coinciding with the last Multiannual Financial Framework (MFF) 2007-13. For the calculation of cross-border flows in the US, data on federal tax collection and spending by State and category are taken from the annual reports of the Internal Revenue Service (taxes) and the US Census Bureau (spending), with deficit neutrality imposed in the long-term (pre-crisis) but allowing the short-term impact of federal borrowing on cross-border flows to be analysed during the crisis.<sup>(2)</sup>

The remainder of the paper is structured as follows. The second section briefly describes the revenue side of the EU budget. The third section provides an overview of expenditure. The fourth section presents two measures of cross-border flows: country-specific and community-wide. Section five compares them with cross-border flows in the US. Section six concludes. The financing of the EU budget is regulated by the 'own resources' legislation and consists mostly of transfers from Member States. Revenues can be classified in four main categories (Graphs ). A levy on the Member States' GNI is by far the main source of financing and covered 70% of the total financing need of the European Union in 2007-13.<sup>(3)</sup> The rest of the budget was financed by transfers to the Community budget of a percentage of the harmonised VAT

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<sup>(1)</sup> The regulation laying down the Multiannual Financial Framework 2014-2020, adopted by the Council of the European Union in December 2013, sets the maximum annual amounts ('ceilings') which the EU may spend in different policy areas ('headings') over a seven year period.

<sup>2</sup> <sup>(1)</sup> For the pre-crisis period we used a database building on those sources and having the advantage of imposing deficit neutrality on its estimates (Tax Foundation, 2007). It provides, hence, an approximation of the amount of cross-border flows that may be considered 'physiological' in the United States and takes fully into account the cost of the federal deficits incurred to sustain them. For the post-crisis period, instead, we constructed a similar database without imposing deficit neutrality to analyse the short-term impact of federal borrowing on cross-border flows.

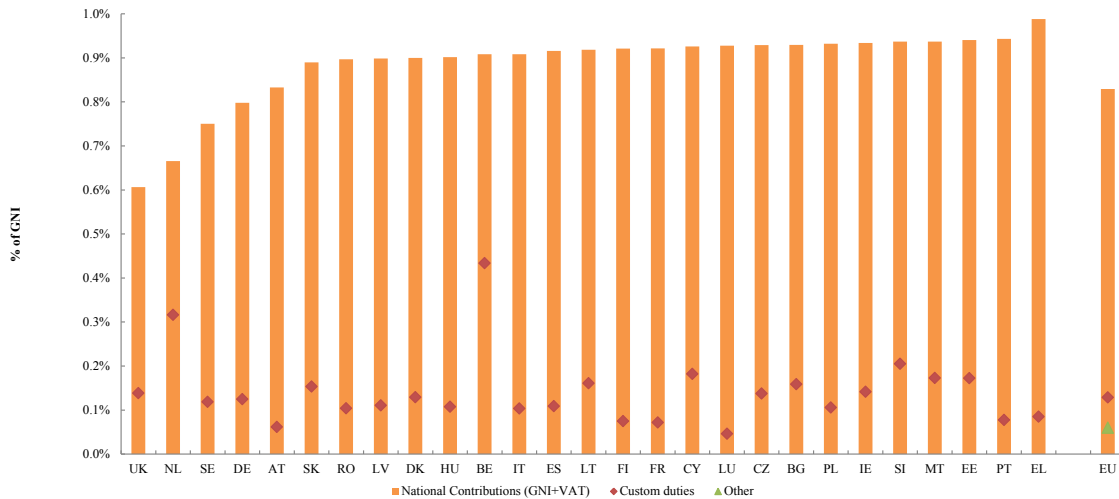
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<sup>(2)</sup> This is calculated using a uniform percentage for all Member States (0.7554 % in 2012).

## 2. THE REVENUE SIDE OF THE EU BUDGET

base of each EU country and custom duties (both representing 12% of total EU revenue),<sup>(4)</sup> and by 'other revenues' (6% of total EU revenue, largely taxes paid by EU staff and fines from companies that breach competition or other EU laws). Although not raised through direct taxation at the EU level, the term "own resources" refers to revenue accruing automatically to the EU budget in order to finance its operations without the need for any subsequent decision by national authorities.

Graph 2.1: Average yearly contributions to the EU budget, 2007 - 2013, as a share of GNI



Source: European Commission

As a result of a system based on flat rates applied to harmonised bases, most – though not all - member states contribute to the EU budget a sum roughly equivalent to 0,9% of National GNI. Despite several attempts by the Commission to avoid *ad hoc* interventions, several exceptions and rebates have been introduced over time to an otherwise fairly simple system. Due to these 'corrections' (see Box 1 for a summary), countries such as the UK, the Netherlands, Sweden, Germany and Austria reduce their combined GNI and VAT contributions by up to one third. As it will be shown in the next section, they also tend to receive less from the EU budget, yet the rebates tilt the current system of 'national contributions' slightly towards the regressive side.<sup>(5)</sup> The large custom duties contributions from the Netherlands and Belgium, instead, reflect the importance of the ports of Antwerp and Rotterdam for extra-EU trade. However, they are not classified, nor can be considered, as 'national contributions'. They are indeed inextricably linked to the 'custom union' and apply to goods from third countries entering the EU as a common entity, even if their final destination is another Member State. The negotiations for the programming period 2014-20 brought no significant changes to the current system of 'own resources'. GNI-based contributions will remain the main source of financing and the rebates will continue to apply until 2020.

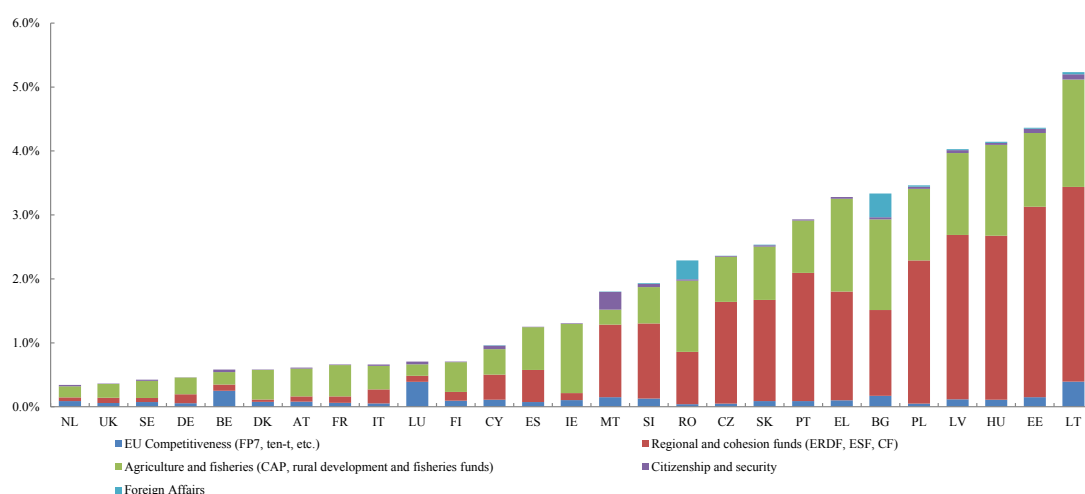
<sup>(4)</sup> Agricultural duties and sugar levies are also considered 'traditional own resources', but they amount to only 1% of Custom Duties. Given their limited macroeconomic relevance, and for the sake of simplification, the emphasis in this note is on Custom Duties only. Currently, twenty five percent of custom duties are retained at the Member State level, therefore only three quarters are channelled to the EU Budget.

<sup>(5)</sup> As we shall see in section 2, this regressivity is offset in net terms by the progressivity of the expenditure side.

### 3. THE EXPENDITURE SIDE OF THE EU BUDGET

Turning to the expenditure side, EU outlays closely reflected the allocation agreed in the regulation laying down the Multiannual Financial Framework (MFF) 2007-13. Expenditure remains largely focused on the agricultural sector (more than 40 per cent), which receives nearly as much support as the sum of all other economic sectors. <sup>(6)</sup> The second and third spending categories are 'EU Cohesion Policy' (35 per cent, largely targeted to low-income regions) and 'Competitiveness' (10 per cent, largely targeted to R&D, lifelong learning, SMEs, and cross-border infrastructure). Foreign relations ('Global Europe') and administration account for nearly 6% each. Despite a cut of 3.6% in real terms, expenditure planned for the MFF 2014-20 is broadly in line with the previous MFF. <sup>(7)</sup>

Graph 3.1: EU budget execution 2007-2013, yearly average expenditure, by main policy area and country, expressed as a share of Gross National Income



Source: European Commission

Unlike the revenue side, expenditure is strongly progressive and quite heterogeneous across countries. It ranges from 0.3% of GDP to 5% of GDP (Graph ). Within the EU budget, the main channels of redistribution are the so-called Cohesion Policy funds <sup>(8)</sup>, which account only for one third of the EU budget. This reflects the objectives of the Cohesion Policy, which is to foster economic convergence within Europe through the provision of public goods such as infrastructures, R&D, skills and human capital formation, etc. The role played by the rest of the EU budget in terms of redistribution is, on the other hand, negligible. It largely compensates for national contributions into the community budget (only partially for net contributors). What is worth emphasising is that the Country allocation is largely established ex-ante in the context of the MFF adoption and there is no room to significantly depart from it without amending the regulation (which requires unanimity in Council). In other words, discretion in annual budgeting is rather limited once the MFF has been agreed. Furthermore, 75% of EU expenditure is a matter of "shared management" with individual Member States. <sup>(9)</sup> A straightforward way to calculate the net budgetary position of each Member State is to deduct National contributions paid from EU outlays

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<sup>(6)</sup> Expenditure related to fisheries amounts to less than 2% of the total earmarked for 'agriculture and fisheries'.

<sup>(7)</sup> Compared to the programming period 2007-13, the main novelties regard an increase in the community expenditure for 'competitiveness' and 'security and citizenship', largely compensated by a reduction in 'Economic, social and territorial cohesion' (EU Cohesion Policy funds) and 'Sustainable Development' (Agricultural, Rural Development and Maritime Funds).

<sup>(8)</sup> The main Cohesion Policy funds are the European Regional Development Fund (ERDF), the European Social Fund and the Cohesion Fund (CF).

<sup>(9)</sup> This means that the latter propose projects, distribute funds and manage expenditure. A set of checks and balances is put in place by the Commission to ensure that the funds are managed properly and in accordance with the rules and the overall framework agreed at the EU level. However, the decision regarding which projects to undertake remains to a large extent a prerogative of the Member State.

received. Despite its apparent simplicity, there are both practical and theoretical problems with this approach. From an economic angle, this measure does not provide a proxy of cross-border flows for the EU as a whole, but only for each single country *vis a vis* the EU budget. From a policy communication perspective, net operating balances can be all too easily misinterpreted as 'return' from the EU budget. Although often used in the context of budgetary negotiations, this reading of 'net operating balances' is deeply misleading and suffers from three important shortcomings. First, it would imply that the EU budget was a zero sum game, where a participating country can only gain at the expenses of others. Second, and more fundamentally, identifying net operating balances as 'net impact' confuses inputs with outputs and fails to account for spill-over effects and common gains. Net benefits go beyond net operating balances and include broader economic impacts in terms of trade opportunity, employment and productivity (both in terms of first and second round effects).<sup>(10)</sup> Third, the data on net operating balances is simply cash and therefore bound to be only broadly indicative from an economic geography perspective (e.g. problems with mapping of real final beneficiaries<sup>(11)</sup>, incidence of custom duties, etc.).

Despite these important words of caution, if properly used, cash data on net operating balances can provide useful insights on budgetary implementation. If divided by Gross National Income, they shed light on the magnitude of budgetary inflows and outflows in relation to a reliable and harmonised measure of national prosperity. Although grossly misinterpreted as a proxy of 'net benefits', it is on the basis of this indicator that some Member States have considered their contribution to the EU budget to be unduly large and have been successful in negotiating rebates.<sup>(12)</sup> This section aims to shed light on this issue and, in addition, to calculate the overall amount of resources that are re-allocated from one country to another through the EU budget. To do so it makes use of two complementary measures. The first one simply provides net National contributions to the EU budget as a share of National GNI. The second one calculates the total amount of resources that flow from net payers to net receivers for the EU as a whole. Together they provide an overview of the cross-border flows operated through the EU budget at both the National and EU level. The results are then assessed *vis a vis* other benchmarks. The rather long period of time considered (2007-13) will allow to smooth out annual fluctuations and to cover in full the past MFF. For reasons of consistency and transparency, net operating balances are calculated according to the Commission guidelines. Expenditure on administration and revenue from custom duties, hence, are not considered as national outlays or contributions. The financing of the rebates for the UK, Germany, Austria, Sweden and the Netherlands are instead fully taken into account.<sup>(13)</sup>

#### 4.1. NET OPERATING BALANCES FROM A MEMBER STATE PERSPECTIVE

Net operating balances are of large macroeconomic significance for some Member States, largely due to the concentration of Cohesion policy spending in catching-up regions. Overall, average annual net payments from the EU budget were above 2% of GDP for eight Member States. As shown in Graph , there is a strong correlation between GDP per capita and net outlays. Yet, the correlation is non-linear and largely breaks down for countries that are net contributors. In other words, while countries with lower GDP per capita generally receive higher net transfers from the EU, contributions among net contributors are not equally differentiated.<sup>(14)</sup> This is partly due to the broad neutrality of both the revenue, with the rebates slightly tilting it towards regressive, whereas Cohesion Policy works in the opposite direction on

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<sup>(10)</sup> EU investment in transport infrastructure in a Member States, for instance, benefits citizens and companies elsewhere through increased trade and higher growth in the EU as a whole or in certain trading partners.

<sup>11</sup> <sup>(11)</sup> For instance, net operating balances consider payments under the common agricultural policy by the country receiving it, even if the land owner is from another country.

<sup>12</sup> <sup>(12)</sup> For a review of the history and functioning of the system of rebates see European Commission (2011).

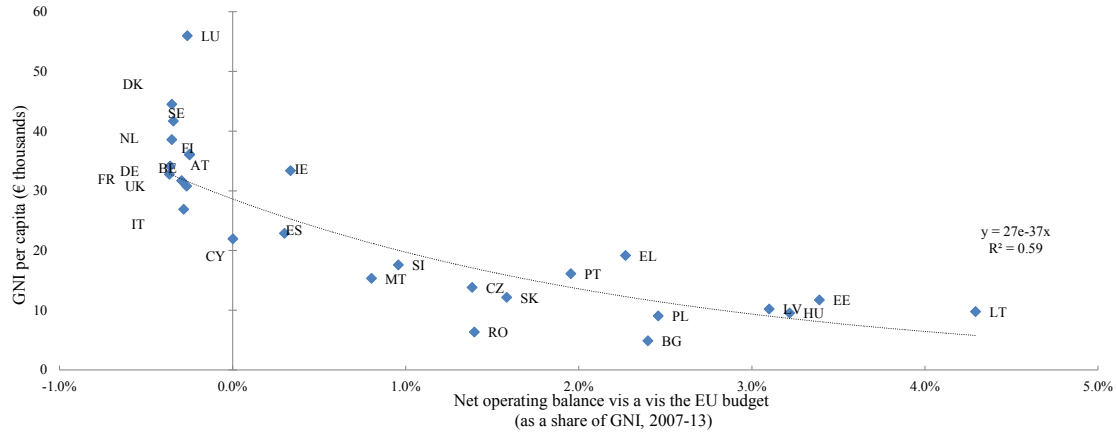
<sup>13</sup> <sup>(13)</sup> For more information on the calculation of net operating balances, please visit the Commission website here: [http://ec.europa.eu/budget/financialreport/2013/annex3/index\\_en.html#note2](http://ec.europa.eu/budget/financialreport/2013/annex3/index_en.html#note2)

<sup>14</sup> <sup>(14)</sup> A particular case is Ireland, which is at a net beneficiary in 2007-13 despite featuring one of the highest income per capita in the EU.

the expenditure side. As a result, net flows are quite progressive for catching-up countries but broadly inelastic to income per capita among net payers.



Graph 4.1: Net contributions to the EU budget and GNI per capita by Member State, 2007-2013 average



Source: European Commission

#### 4.2. NET OPERATING BALANCES FROM AN EU PERSPECTIVE

Despite some countries receiving sizeable transfers, the figures in the previous section are Country specific and do not provide a measure of the overall amount of cross-border flows operated through the EU budget. <sup>(15)</sup> To avoid this problem a broader measure of cross border flows for the EU as a whole is proposed. This indicator can be calculated by dividing the total amount of net outlays received by net beneficiaries (or paid by net contributors) to the EU budget by the GDP of the EU (last three rows in Table A1.1). Between 2007 and 2013, on average, the net contributors have paid into the EU budget some €80 billion per year in gross terms. However, each year they received back around €52 billion. Similarly, between 2007 and 2013, net beneficiaries have received some €55 billion from the EU budget while paying around €22 billion into it. <sup>(16)</sup> On average, around €30 billion are actually transferred from net creditors to net beneficiaries within the EU. If we divide this amount by the GNI of the EU, we obtain a more indicative measure of the overall magnitude of net cross-border flows operated through the EU Budget.

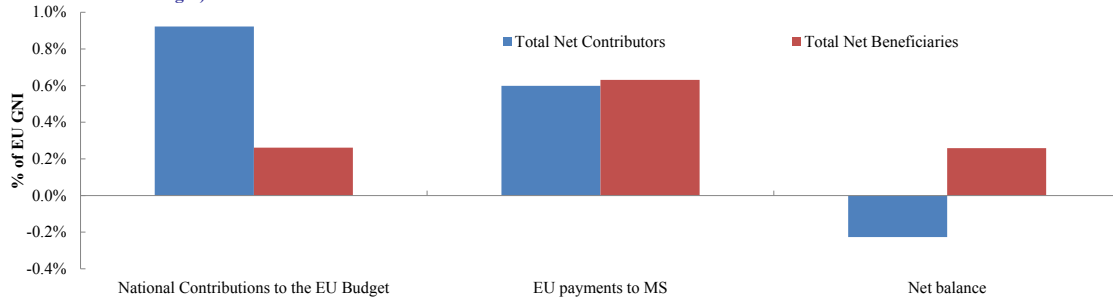
As shown in Graph 4.2, this cross-border transfer is approximately equivalent to 0,25% of the GNI of the EU. In other words, between 2007 and 2013 a yearly amount equivalent to a quarter of a point of GDP has crossed a border through the EU budget.

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<sup>(15)</sup> Since most of the net beneficiaries are relatively small economies, the visual representation of transfers in Graph may not provide a full picture from a macroeconomic perspective. In other words, the macroeconomic dimension of the EU budget would clearly be different if a net transfer equivalent to 4% of the receiving country's GDP was received by a large economy like Spain, rather than Lithuania.

<sup>(16)</sup> Those figures are reported in Table A1.1. National payments refer only to national contributions and therefore do not include custom duties and sugar levies (traditional 'own resources'). Expenditure does not include administration and spending directed towards non-EU countries. Both items represent between 10% and 15% of the total EU budget but cannot be assigned to a Member State and therefore are not considered in these calculations.

Graph 4.2: Cross-border flows operated through the EU budget (2007-2013 averages)



Note: Table 1 in the annex provides the underlying data by Member States  
 Source: European Commission

Similar calculations can be made by restricting the sample to euro area countries only. In this way it is possible to calculate the amounts transferred within the euro area via the EU budget. Since most of the euro area countries are net contributors this exercise somewhat unsurprisingly shows that the EU budget does not operate any significant transfer within the euro area. To be sure, some euro area member states are net beneficiaries, but those are either small (EL, SI, SK, LV, LT, EE) or the net support received is limited relative to the size of their economy (ES, PT). If the euro area is considered as a whole, the EU budget transfers a limited amount of resources outside the euro area (last row in Table A1.1). This is clearly desirable, given the need to foster convergence within the EU and the fact that catching up Member States are generally not yet in the euro area. However, it also shows that the current structure of the EU budget does not lend itself easily to transfer resources within the euro area. For that, an entirely new framework would be needed.

Finally, to provide a simple benchmark, cross-border flows within the EU can be compared to extra-EU cross-border flows. The latter can be approximated by official development assistance. Net transfers between the EU and the rest of the world (mostly foreign aid) amount, as an aggregate, to 0.5% of the EU GDP. <sup>(17)</sup> Although the latter falls well behind the target agreed with the United Nations of 0.7% of GDP (the so-called "UN millennium development target"), the fact remains that transfers for official development assistance (at both national and community level) are twice as large as transfers within the EU. The degree of so-called "solidarity" embedded in the EU budget is, in some sense, lower than the one towards the rest of the world; which is arguably already low.

#### 4.3. SUMMING UP THE RESULTS

In short, our measurement of net operating balances and cross-border flows show that:

the EU budget redistributes significant amount of resources towards catching-up Countries (up to 4% of GDP of the recipient country in the 2007-13 period), but not within the EU as a whole, where the total of cross-border flows amount to a quarter of a point of the EU GDP

net contributions are progressive for the main beneficiaries but rather inelastic to differences in income per capita among net creditors

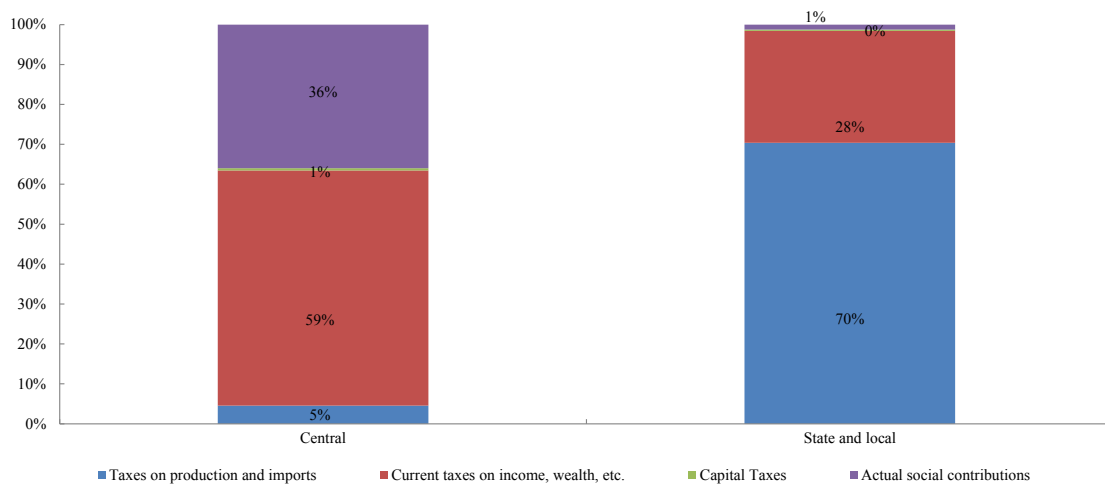
Since the main net beneficiaries are outside of the euro area, cross-border flows approach to zero if the euro area only is considered. In this section the calculations presented earlier are replicated for the US to provide an additional, more relevant and ambitious benchmark. While it may be more informative than

<sup>17</sup> (17) This is the sum of foreign aid granted at both the national and community level by EU Member States.

foreign aid, comparisons between the EU and the US cross-border flows must be made with caution.

First, unlike the EU, the US is a fully fledged fiscal and political union. Taxes collected at the federal level have ranged between 14 and 20 per cent of GDP for the last 50 years, with an average of 17 per cent. Of the federal revenue collected in 2012, for instance, the main sources of revenue were income and payroll taxes, which together account for 95% of total federal receipts (Graph ).<sup>(18)</sup> The remaining half of general government revenue was raised at the state and local level, mostly through sales taxes (state level) and property taxes (local level). The European Union, by contrast, collects roughly one per cent of GDP and not directly through taxation but through transfers from Member States.

Graph 5.1: Total receipts from taxes and social contributions at the Central, State and Local Government level in the US, % of total



Source: European Commission

Second, the federal government in the US is responsible for more than half of total public expenditure and covers areas such as social security, education and defence, while the EU spends less than 2% of total public expenditure and mostly in the form of sectorial policies (Economic Affairs in graph 5.2).<sup>(19)</sup> Total public expenditure in the US amounted to 40% of GDP (2012).<sup>(20)</sup> Expenditure is shared between the central and the local level in most policy areas (Graph ). The main exceptions are 'defence' and 'social protection', which fall directly under the responsibility of the federal government.<sup>(21)</sup> The latter is of particular interest when analysing cross-border flows.

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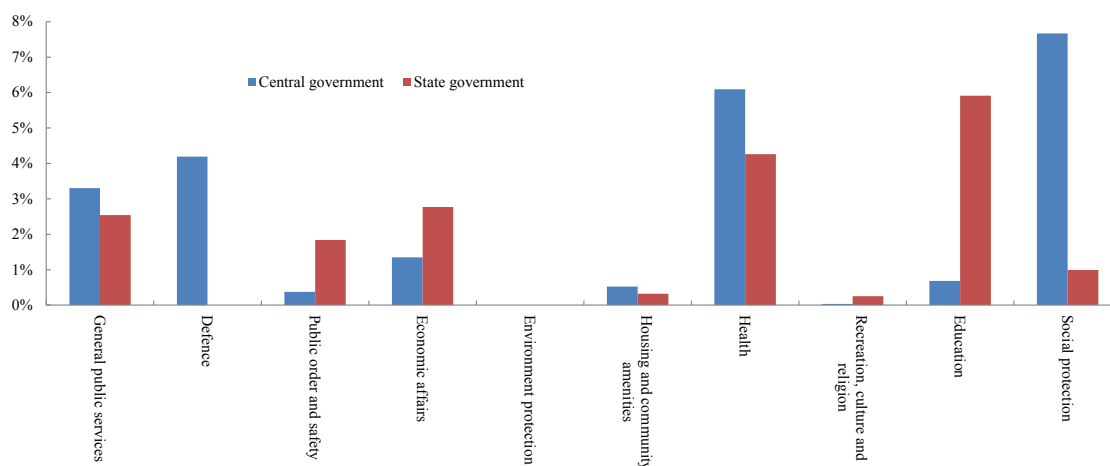
<sup>(18)</sup> About half of the US federal revenue came from personal income taxes, 10% by corporate income taxes, 36% from payroll taxes (social security and insurance), and only 5% from other sources.

<sup>19</sup> <sup>(19)</sup> Three quarter of the EU expenditure is actually a matter of shared management. This means that the EU Member States manage 98% of expenditure directly and 1,5% in shared management, which leaves only 0.5% of total public expenditure in the EU to be managed directly at the EU level.

<sup>20</sup> <sup>(20)</sup> Out of this total, 24 pps of GDP were spent at the federal level, while 16pps of GDP were spent at the state and local level.

<sup>21</sup> <sup>(21)</sup> On the other hand, 'education' and 'public order' are mostly of state and local competence.

Graph 5.2: US Government expenditure at the Central and State/Local level, by main category of expenditure (COFOG classification), % of GDP, 2012



Source: OECD

Due to the nature of the US social security system, which is federal, it is perfectly possible that payroll taxes are paid from one or several States throughout the career of an employee and the benefits paid out in yet another State. For example, it is possible that social security contributions for a federal employee in Washington D.C. are paid from the District of Columbia while some of the benefits (e.g. pension of federal employees) may be paid in a different State if a recipient moves to Florida or New Jersey after retirement. Being the only data readily available based on cash flows at the State level, our calculations would classify such a transaction as a cross-border flow although it is in fact part of a fiscal arrangement between the citizen (regardless of its residence within the US) and the federal government. Similarly, a non-negligible part of federal expenditure is related to public procurement expenditure and salaries and wages which do not represent fiscal transfers. This is also why we prefer to use the expression 'cross-border flows'.

Rather than actual fiscal transfers, our estimates would nonetheless provide an approximation of the cross-border cash flows operated automatically by the US federal budget, under the constraint of the data available and given the competences of the federal government. Understandably, the latter are considerably different from the ones of the EU budget and any comparison is not meant to be done with its present setting. Yet, the US example can provide an indication of the magnitude of cross-border flows involved in a federal union. In this respect, the US example remains a particularly useful benchmark because it represents a large continental area comparable to the EU for population, extension, economic development and capital stock. Not least, it is relevant for the euro area Member States, as the US States also share the currency.

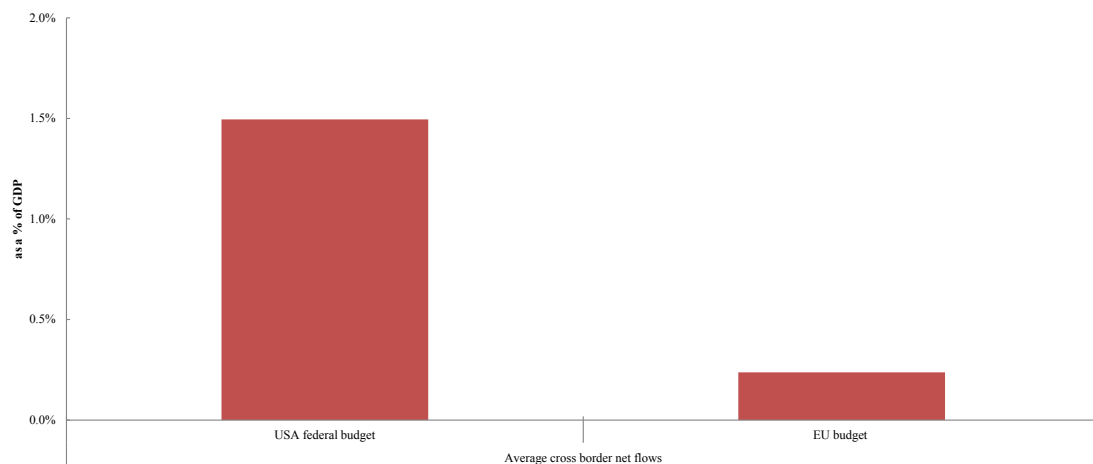
## 5.1. COMPARING CROSS-BORDER FLOWS IN THE US AND THE EU: A FEW INITIAL RESULTS

For the calculation of cross-border flows in the US, we used a data set compiled by the tax foundation spanning from 1980-2005 (the latest year for which data are available). Data on tax collection and spending by State and category are taken from the annual reports of the Internal Revenue Service (taxes) and the US Census Bureau (spending). The database used has the advantage of correcting for some of the problems arising when using cash data. Notably, it takes into account the net future liability represented

by federal deficit spending and imposes deficit neutrality on its estimates.<sup>(22)</sup> While this approach would not lend itself easily to analyse exceptional circumstances such as the late 2000s crisis, it is rather useful when looking at longer, relatively stable, periods of time. It provides, in this case, an approximation of the amount of cross-border flows that may be considered 'physiological' in the United States and takes into account the cost of the federal deficits incurred to sustain them by imputing them to each State in proportion of its contribution to the federal budget.

In light of the aforementioned structural differences between the EU and the US budgets, cross-border flows are found to be rather different (Graph ).<sup>(23)</sup> On average, yearly cross-border flows within the US amounted to 1.5% of the US GDP between 1980-2005, compared to 0.24% in the EU (in 2007-2013). This is a substantial difference, but not astonishing, if one considers that the US budget is up to twenty times larger. For each euro paid by an average net contributor, about 90 cents return via the US budget. At the margin, this is a lower redistributive power of the EU budget. Yet, because of the larger size of the US federal budget, the overall redistribution is much larger. The impact of size on cross-border flows is visible when looking at State-by-State data.

Graph 5.3: Average yearly cross-border flows operated through the EU and the US budget



Note: US data cover the period 1980-2005. EU data cover the latest programming period 2007-2013.

Source: European Commission and Tax Foundation

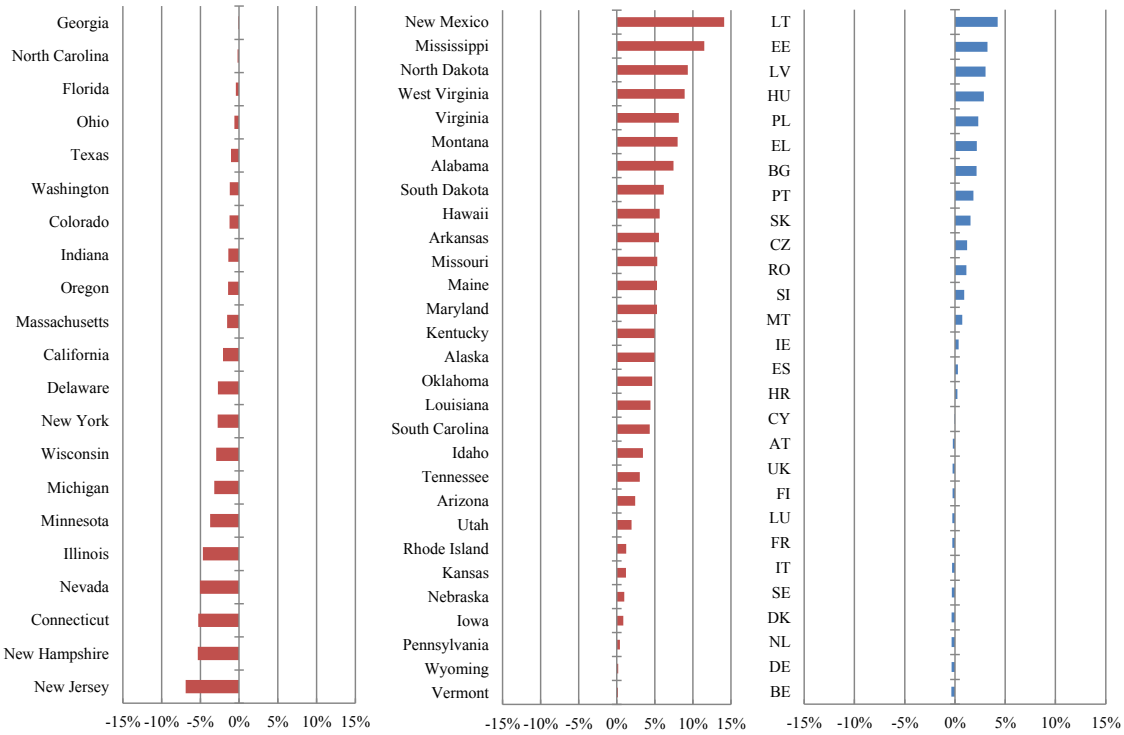
First, among the net contributors, US States' contributions to the federal budget are more heterogeneous than in the EU (Graph and Annex 1 Table A1.3). Slightly less than half of the US States (21) were net contributors to the federal budget, on average, during the period 1980-2005. Unlike the EU, where all net contributors broadly contribute a comparable amount as a share of their GDP (between 0.2% and 0.35% of GDP), net contributions range from a few decimal points to 7% of GDP. As a share of their GDP, on average, net contributors paid 2.6% of GDP each year between 1980 and 2005 and at least eight US States contributed more than 3% of GDP in net terms. The highest contribution in the EU was less than

<sup>(22)</sup> During fiscal years in which the federal government runs deficits some spending is necessarily financed through borrowing. This creates implicit tax liabilities for states that must be repaid eventually. To incorporate these implicit tax liabilities into the analysis, the study of the tax foundation used the following adjustment to state tax burdens. First, the total federal tax burden was increased by the size of the federal deficit. Second, this total burden was allocated among states based on each state's proportion of the actual federal 'tax burden'. In the next section, we will depart from this approach and simply use the IRS and Census Bureau data as they are. Also, we will not calculate 'tax burden' estimation following the tax foundation methodology but simply use taxes collection figures as reported in the IRS annual report. By combining the two approaches, we will be able to see the difference between average transfers over a long and relatively 'calm' period of 25 years (1980-2005) and in the wake of the recent crisis (2009-10).

<sup>(23)</sup> Annex 1 Table A1.3 provides a table with state-by-state data.

0.4% of GDP. <sup>(24)</sup> The coefficient of variation for net contributors (standard deviation divided by the mean) is indeed twice as large in the US than in the EU.

Graph 5.4: Yearly net transfers to and from the US federal budget (1980-2005 average) and the EU budget (2007-2012 average), as a share of GDP of EU Member States

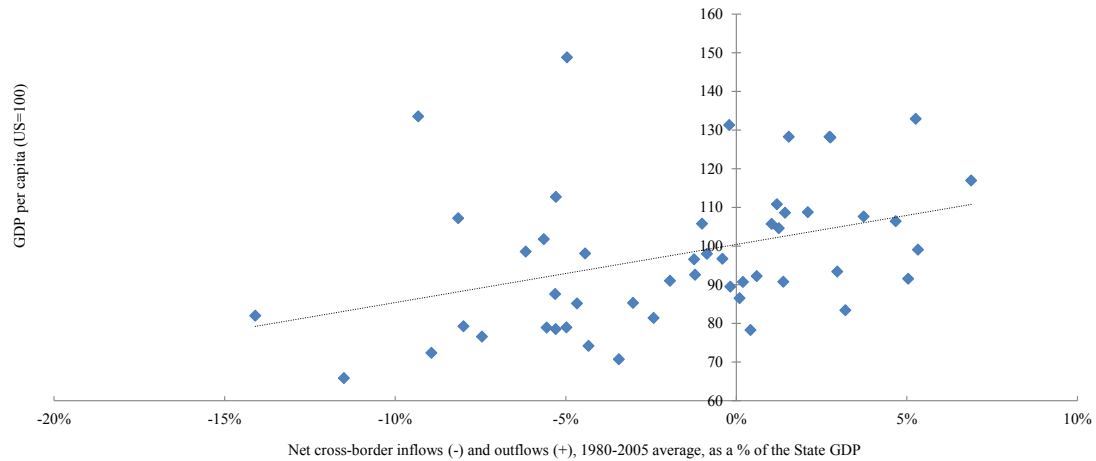


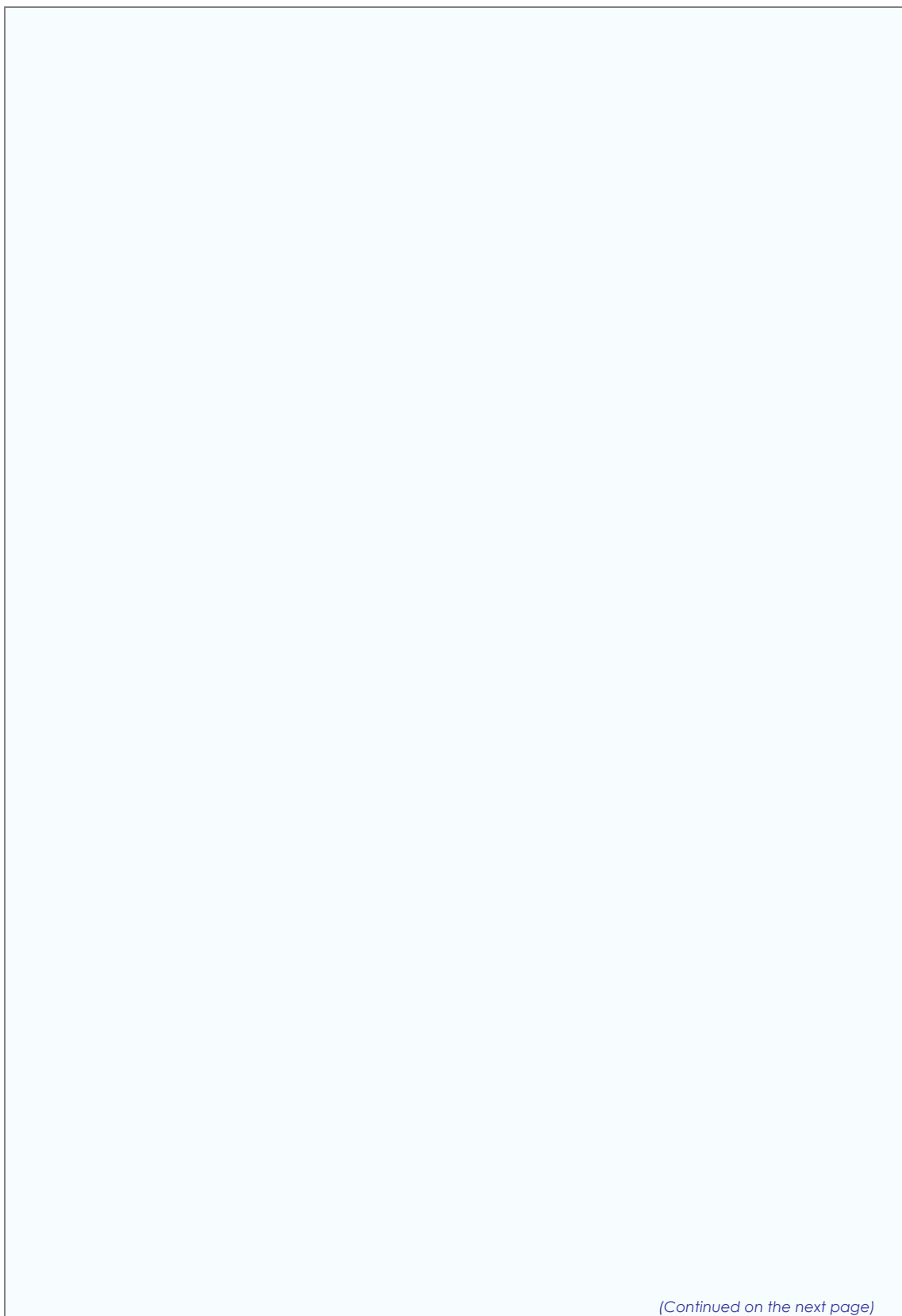
Source: European Commission and Tax Foundation

Second, net transfers received by US States through the federal budget are significantly more heterogeneous than in the EU (Graph and Annex 1 Table A1.3). They ranged from 0.2% of GDP in Vermont and Wyoming to more than 10% of GDP in Mississippi and New Mexico. Within the US, at least 15 US States received more than 5% of GDP in yearly net transfers, on average, between 1980 and 2005. On average, US net beneficiaries received net inflows equivalent to 4.8% of their GDP. As seen in Box 2, cross-border flows of this magnitude are not a peculiarity of the US system. Within the EU, on the contrary, transfers range from 0.3% of GDP in Spain to about 4% of GDP in Lithuania.

<sup>24</sup> (25) The EU net contributors paid, on average, 0.27% of their GDP.

Graph 5.5: GDP per capita by State (US=100) and US federal net transfers





*(Continued on the next page)*

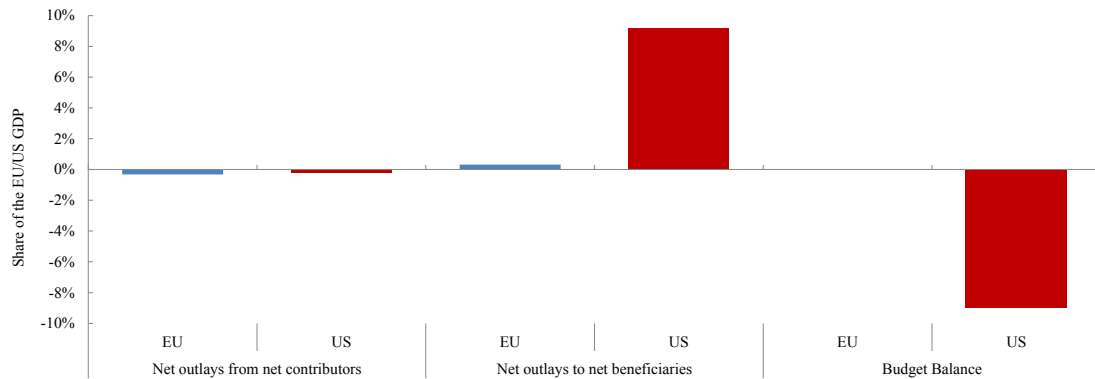


Box (continued)

**5.2. CROSS-BORDER FLOWS IN THE US IN THE WAKE OF THE LATE 2000S CRISIS**

In this section we compute cross-border flows in the US during the late 2000s crisis. Unlike the previous data-set, deficit neutrality will not be imposed, making it more relevant for analysing the impact of federal borrowing on states net balances. <sup>(27)</sup> Unlike the EU budget, which must be balanced, the US federal government can borrow and did so heavily in the wake of the crisis. This explains both the large increase of net receivers and the difference between contributions and payments.

Graph 5.6: Average yearly cross-border flows operated through the EU and the US budget in 200-2010



Note: US data cover the period 1980-2005

Source: European Commission, Internal Revenue Service (IRS) and Census Bureau

Only three US States (Delaware, New Jersey and Minnesota) were net contributors to the US Budget during this period (Annex 1 Table A1.4). The remaining 47 States all received more than they contributed to, in several cases significantly more than usual. Clearly, this extraordinary spending was not paid for by taxpayers in Delaware, New Jersey and Minnesota. In fact their net contributions to the US Budget amounted to 0.2% of the US GDP. On the contrary it was largely paid for by the US federal budget deficit, which averaged around 9% of GDP in 2009-10. This is exceptional, and largely due to the impact of the crisis. On the other hand, it also shows that a large part of the short-term stabilisation function within a large economy is played by the capacity for the federal budget to borrow from the market and not by an increase of regional net outlays to the federal budget.

<sup>27</sup> (27) Federal expenditures by state are derived from the Consolidated Federal Funds Reports for 2010. This report tracks down the near entirety of expenditure of the federal government by State and category of spending (social security, grants, procurement, salaries and wages of federal workers, etc.). Interest payments and payments abroad are on the other hand not covered. We use data from fiscal years 2009 and 2010 only because the US Census Bureau has suspended the publication of reports since 2010. Turning to the revenue side, data on federal taxes paid aggregated to the state level are taken from the Internal Revenue Service (IRS) Statistics on Income annual volumes for 2009 and 2010. These figures include all individual, payroll, corporate, estate, gift and excise taxes. Total taxes collected are calculated simply by deducting refunds from each year's gross collections.

### 5.3. CROSS-BORDER FLOWS IN THE US AND THE EU: WHAT LESSONS CAN BE DRAWN?

Building on the results and stylised facts presented above, there are four main policy considerations that can be taken from the US experience and may be relevant for the EU and, most notably, the euro area, in the future.

First, in the case of the US, stabilisation policies during crisis times are largely a result of the capacity of the federal government to borrow. They do not result from, nor are paid by, an increase of net contributions from better performing US States. <sup>(28)</sup>

Second, the size of the budget matters. Only about 10% of the US federal budget is redistributed against nearly a quarter of the EU budget. Yet, the US budget is up to twenty times larger. Consequently, even during normal times, redistribution across US States through the federal budget is significantly larger than across EU Member States. This is why a sizeable budget is generally considered one of the essential elements of a well-functioning monetary union, together with other elements such as factor mobility, flexible prices, broadly synchronised business cycles, etc (e.g. Kenen, P., 1969). While redistribution operated through the EU Budget is seemingly large for some EU member states and rightly focused on investment to support catching-up regions, it is still incomparable to cross-border flows within the United States. As pointed out in the "Report of the study group on the role of public finance in European integration" (European Commission, 1977; Box 2), the more countries are economically and financially integrated, the more current account imbalances are likely to occur and the more fiscal transfers matter along with the size of the budget.

Third, cross-border flows in the United States happen automatically due to the progressivity of the tax system. The main sources of revenue at the federal level are personal and corporate income taxes and payroll taxes. The progressivity of the tax system also makes them countercyclical. Economic agents in high growth areas, therefore, automatically pay more into the US budget largely due to faster income growth. Feyrer and Sacerdote (2013) find that each dollar decrease in GDP per capita at the State level is associated with a tax decrease of 55 cents. Unsurprisingly, they find no correlation between community transfers and local economic conditions in the EU. A one euro fall in GDP only reduces contributions to the EU budget by about one cent. <sup>(29)</sup> As seen in section 2, the financing of the EU budget is indeed unrelated to the cycle and broadly neutral, if not slightly regressive in levels, due to rebates granted to some of the more prosperous countries. Even in its current minimalistic setting, there is a rather broad scope for the EU financing to adapt better to the cycle.

Fourth, the categories of expenditure also differ radically. The US surely represent only one of many examples of federal spending allocation, yet it can be in principle argued that it would be justified for expenditure at the EU level, to focus more on the provision of common public goods where preferences broadly match across countries and economies of scale and/or externalities are large. Furthermore, a large part of federal spending in the US reflects a direct fiscal relationship between the federal layer of government and the American citizen, regardless of its residence. Unlike cross-border flows in the EU, it is not the result of periodic intense negotiations among States representatives or the result of regional income equalisation tools. It happens for the most part automatically through the well-established structure of the federal tax and spending system. This paper provides an overview of revenues, expenditures and cross-border fiscal flows operated through the EU budget. Our estimates show that net

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<sup>28</sup> (28) In fact, a supranational borrowing capacity has been created through the institution of the European Stability Mechanism. However, this intergovernmental body can only engage in lending operations. It is also, though not solely, for this reason that the ESM differs fundamentally from a federal budget and cannot replace it.

<sup>29</sup> (29) US Federal spending, on the other hand, is found to be much less responsive to state level economic shocks (especially once the great recession is controlled for), with one exception being the automatic stabilisers such as unemployment insurance. A one per cent increase in unemployment at the state level brings an additional \$53 per capita of Federal spending on unemployment insurance. This is small in the context of regular US Federal transfers of thousands of dollars per capita, but large relative to EU transfers.

## 6. CONCLUSIONS

flows are significant for the main beneficiaries of Cohesion Policy, i.e. catching up regions, but negligible for the European Union as a whole.

The main channels of redistribution are the so-called Cohesion Policy Funds (ERDF, ESF, CF), which account for a third of the annual budget of the EU and transfer resources ranging from 1% to 4% of the GDP of the main beneficiaries. The remaining two thirds of the budget (common agricultural policy, research programmes, foreign affairs, etc.) are generally not responsible for redistribution of resources of macroeconomic relevance.

Cross-border flows for the EU as a whole, on the other hand, are much lower and amount to a quarter of a percentage point of the EU GDP. In other words, for each euro paid by an average net creditor, 75 cent are paid back and only 25 cent flows to other EU members states. Since most Cohesion Policy countries are not yet members of the euro area, the latter figure approaches to zero if the sub-set of euro area countries is considered.

To provide a first evaluation of the magnitude of these flows, we note that net transfers paid by the EU Countries to the rest of the world in the form of 'official development assistance' amounts to 0.5% of the EU GDP. Although the latter amount is still arguably low, it is twice as high as the overall cross-border flows within the EU. One could hence argue with some reason that cross-border flows within the EU (or 'solidarity' as they are sometimes referred to) amount to half of those towards third countries.

To provide a more relevant benchmark, cross-border flows for the US are also calculated. Outlays received by net beneficiaries in the US are much larger in normal times due to the larger size of the federal budget, and incomparably larger in bad times due to federal borrowing. Importantly, they are not voted upon each year, but happen for the most part automatically and almost invisibly through the federal tax system.

This is an important point of departure from the EU, where the budget is almost entirely financed by national contributions and resources are largely, and rather rigidly, allocated on a country-by-country basis following periodical and rather intense inter-governmental negotiations. In the US, on the contrary, a non-negligible part of cross-border flows stems from a direct fiscal relationship between the citizen – regardless of its residence – and the federal layer of government.

Finally, cross-border flows in the US are also broadly comparable to those estimated for other federal and unitary EU Member States (European Commission, 1977). Although the budgets of the United States and Member States are not comparable to the EU budget in its present form, they provide an indication of the magnitude and drivers of cross-border flows automatically and almost invisibly operating in a fully-fledged economic, political and monetary union.

While keeping in mind the limitations and long-term perspective of these comparisons, the evidence gathered in this paper suggests that the narrow interpretation of notions such as 'fairness' and '*juste retour*' constantly resurfacing in the context of EU budgetary negotiations may benefit from being framed in a broader, arguably more relevant, perspective. Begg, I., Enderlein, H., Le Cacheux, J. and Mrak, M., (2008). Financing of the European Union Budget, *Sciences Po publications*, Sciences Po, <http://EconPapers.repec.org/RePEc:spo:wpmain:info:hdl:2441/10059>

Béland D. and Lecours A. (2014). Fiscal federalism and American exceptionalism: why is there no federal equalisation system in the United States? *Journal of Public Policy*, 34, pp 303-329.

Bordo, M., A. Markiewicz and L. Jonung (2011). 'A fiscal union for the Euro: some lessons from history', *NBER Working Paper No. 17380*.

## REFERENCES

- De Grauwe, P. (2009). *The Economics of Monetary Union*, 8th ed., Oxford University Press, New York.
- Ecorys Nederland BV, the Netherlands Bureau for Economic Policy Analysis (CPB) and the Institute for Economic Research (IFO), (2009). *A study on EU spending*; European Commission, Directorate-General for Budget, [http://ec.europa.eu/budget/reform/conference/documents\\_en.htm](http://ec.europa.eu/budget/reform/conference/documents_en.htm)
- Escolano, Benedek, Jin, Grandados, Nozaki, Pereira, Rota Graziosi, Sinn, Torres (2015), "Distribution of fiscal responsibilities in federations, in *Designing a European fiscal union: lessons from the experience of fiscal federations*", edited by Carlo Cottarelli and Martine Guerguil, Routledge.
- European Commission (1977), *Report of the study group on the role of public finance in European integration*, Volume I, Brussels, April 1977 [http://ec.europa.eu/archives/emu\\_history/documentation/chapter8/19770401en73macdougallrepv011.pdf](http://ec.europa.eu/archives/emu_history/documentation/chapter8/19770401en73macdougallrepv011.pdf)
- European Commission (2011), *Financing the EU Budget: Report on the operation of the own resources system*, COM(2011) 510 final, Brussels, June 2011
- Feyrer, J. and Sacerdote, B. (2013), "How Much Would US Style Fiscal Integration Buffer European Unemployment and Income Shocks? (A Comparative Empirical Analysis)." *American Economic Review*, 103(3): 125-28.
- Henning R. and Kessler M. (2012), "Fiscal federalism: US history for architects of Europe's fiscal union", *Working Paper 12.1*, Peterson Institute for International Economics.
- Kenen, P. (1969). 'The theory of optimum currency areas: an eclectic view', in R. Mundell and A. Swoboda (eds.), *Monetary Problems of the International Economy*, University of Chicago Press, Chicago/London, pp. 41–59.
- Manasse P., Rota Baldini I. (2013), "What's wrong with Europe?", *CEPR policy insight* N. 67, Centre for Economic Policy Research, November 2013
- Mikko, M. (2006). "Fiscal Transfers and Redistribution in the European Union: Do Smaller member States Get more than their Share?" *Journal of European Public Policy* 13(1) 34–51.
- Oates, W.E. (1972) *Fiscal Federalism*, New York, NY., Harcourt Brace Jovanovich
- Oates, W.E. (2002) 'Fiscal federalism and European union: some reflections' paper presented at the Societa Italiana di Economia Pubblica conference, Pavia, 4-5 October 2002
- Tax Foundation (2007), *Federal Taxes Paid vs. Federal Spending Received by State: 1981-2005*, Washington DC, October 2007 <http://taxfoundation.org/article/federal-taxes-paid-vs-federal-spending-received-state-1981-2005>

## ANNEX 1

Table A1.1: Community revenue and expenditure by EU Member States, 2007-2013 average

EU Budget execution Average 2007-13	National Contributions		Expenditure (excl. adm.)	
	€ million	% of GNI	€ million	% of GNI
Belgium	3,278	0.9%	2,101	0.6%
Bulgaria	328	0.9%	1,213	3.4%
Czech Republic	1,285	0.9%	3,266	2.4%
Denmark	2,178	0.9%	1,409	0.6%
Germany	20,621	0.8%	11,911	0.5%
Estonia	143	0.9%	664	4.4%
Ireland	1,315	0.9%	1,840	1.3%
Greece	2,065	1.0%	6,853	3.3%
Spain	9,478	0.9%	12,961	1.3%
France	18,406	0.9%	13,196	0.7%
Italy	14,068	0.9%	10,260	0.7%
Cyprus	154	0.9%	160	1.0%
Latvia	189	0.9%	848	4.0%
Lithuania	272	0.9%	1,552	5.2%
Luxembourg	271	0.9%	207	0.7%
Hungary	837	0.9%	3,846	4.1%
Malta	56	0.9%	108	1.8%
The Netherlands	3,914	0.7%	2,003	0.3%
Austria	2,417	0.8%	1,778	0.6%
Poland	3,178	0.9%	11,808	3.5%
Portugal	1,545	0.9%	4,799	2.9%
Romania	1,146	0.9%	3,010	2.4%
Slovenia	329	0.9%	679	1.9%
Slovakia	574	0.9%	1,635	2.5%
Finland	1,714	0.9%	1,316	0.7%
Sweden	2,781	0.8%	1,573	0.4%
United Kingdom	11,094	0.6%	6,654	0.4%
<b>Total net contributors</b>	<b>80,741</b>	<b>0.9%*</b>	<b>52,407</b>	<b>0.6%*</b>
<b>Total net beneficiaries</b>	<b>22,893</b>	<b>0.3%*</b>	<b>55,241</b>	<b>0.6%*</b>
<b>Euro area</b>	<b>80,808</b>	<b>0.8%**</b>	<b>74,869</b>	<b>0.7%**</b>

\* as a share of EU GNI

\*\*as a share of euro area GNI

Source: European Commission

Note: national contributions do not include custom duties and sugar levies (traditional 'own resources'). Expenditure does not include administration and spending directed towards non-EU countries. Both items represent between 10% and 15% of the total EU budget but cannot be assigned to a Member State and are not reported in this table.

Table A1.2: **Official Development Assistance (ODA) provided by EU countries and the EU, 2007-2012, million USD**

<b>Official Development Assistance, net disbursement</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2007-12 average</b>
Austria	1808	1714	1142	1208	1111	1106	1348
Belgium	1951	2386	2610	3004	2807	2315	2512
Czech Republic	179	249	215	228	250	220	223
Denmark	2562	2803	2810	2871	2931	2693	2778
Finland	981	1166	1290	1333	1406	1320	1249
France	9884	10908	12602	12915	12997	12028	11889
Germany	12291	13981	12079	12985	14093	12939	13061
Greece	501	703	607	508	425	327	512
Ireland	1192	1328	1006	895	914	808	1024
Italy	3971	4861	3297	2996	4326	2737	3698
Luxembourg	376	415	415	403	409	399	403
Netherlands	6224	6993	6426	6357	6344	5523	6311
Poland	363	373	375	378	417	421	388
Portugal	471	620	513	649	708	581	590
Slovak Republic	67	92	75	74	86	80	79
Slovenia	54	68	71	59	63	58	62
Spain	5140	6867	6584	5949	4173	2037	5125
Sweden	4339	4732	4548	4533	5603	5240	4833
United Kingdom	9849	11500	11283	13053	13832	13891	12235
EU Institutions	11634	13197	13581	12747	17391	17479	14338
<b>Total</b>	<b>73836</b>	<b>84953</b>	<b>81529</b>	<b>83145</b>	<b>90287</b>	<b>82203</b>	<b>82659</b>
Total (as a share of average EU GDP 2007-12)							<b>0.50%</b>

Source: OECD

Table A1.3: Federal Taxation and Spending by US State, 1980-2005 average

1981-2005 averages	Federal Tax Burden (\$millions)	Federal Expenditures (\$millions)	GDP (\$ millions)	Federal Tax Burden (% of GDP)	Federal Expenditures (% of GDP)	Net transfers (% of GDP)
Alabama	15,241	21,880	89,041	17%	25%	-7%
Alaska	3,180	4,459	25,762	12%	17%	-5%
Arizona	17,894	20,481	106,761	17%	19%	-2%
Arkansas	8,393	11,217	50,799	17%	22%	-6%
California	163,327	143,763	933,290	18%	15%	2%
Colorado	19,433	18,027	112,588	17%	16%	1%
Connecticut	24,161	17,931	118,436	20%	15%	5%
Delaware	3,753	3,016	26,949	14%	11%	3%
Florida	70,115	68,702	339,158	21%	20%	0%
Georgia	31,202	31,010	196,467	16%	16%	0%
Hawaii	5,269	7,184	33,947	16%	21%	-6%
Idaho	4,207	5,068	25,018	17%	20%	-3%
Illinois	62,855	46,641	346,782	18%	13%	5%
Indiana	24,301	22,326	142,920	17%	16%	1%
Iowa	11,548	12,148	69,918	17%	17%	-1%
Kansas	11,216	11,984	63,542	18%	19%	-1%
Kentucky	13,767	18,025	85,533	16%	21%	-5%
Louisiana	15,136	20,037	110,549	14%	18%	-4%
Maine	4,817	6,241	26,906	18%	23%	-5%
Maryland	27,635	34,962	138,560	20%	25%	-5%
Massachusetts	36,959	33,915	197,597	19%	17%	2%
Michigan	44,412	36,548	245,768	18%	15%	3%
Minnesota	23,042	18,080	132,985	17%	14%	4%
Mississippi	8,036	13,693	49,190	16%	28%	-12%
Missouri	22,515	29,541	132,255	17%	22%	-5%
Montana	3,119	4,478	16,999	18%	26%	-8%
Nebraska	6,934	7,361	42,471	16%	17%	-1%
Nevada	8,759	6,334	48,118	18%	13%	5%
New Hampshire	6,232	4,602	30,599	20%	15%	5%
New Jersey	52,102	34,535	255,077	20%	14%	7%
New Mexico	5,728	11,265	39,268	15%	29%	-14%
New York	103,506	87,272	588,405	18%	15%	3%
North Carolina	29,669	29,299	186,815	16%	16%	0%
North Dakota	2,457	3,826	14,677	17%	26%	-9%
Ohio	47,350	45,663	280,837	17%	16%	1%
Oklahoma	12,115	15,470	71,886	17%	22%	-5%
Oregon	13,704	12,590	78,082	18%	16%	1%
Pennsylvania	56,395	57,603	297,852	19%	19%	0%
Rhode Island	4,842	5,155	25,352	19%	20%	-1%
South Carolina	13,404	16,928	81,314	16%	21%	-4%
South Dakota	2,785	3,837	17,044	16%	23%	-6%
Tennessee	21,282	25,133	127,245	17%	20%	-3%
Texas	83,730	78,398	513,972	16%	15%	1%
Utah	7,063	7,959	46,082	15%	17%	-2%
Vermont	2,484	2,507	13,437	18%	19%	0%
Virginia	32,946	47,971	184,289	18%	26%	-8%
Washington	28,293	26,436	155,714	18%	17%	1%
West Virginia	5,915	8,893	33,321	18%	27%	-9%
Wisconsin	22,718	18,906	128,871	18%	15%	3%
Wyoming	2,407	2,438	15,063	16%	16%	0%
<b>United States</b>	<b>1,248,352</b>	<b>1,221,739</b>	<b>7,093,512</b>	<b>18%</b>	<b>17%</b>	<b>0%</b>
<b>Net contributors</b>						<b>1,6%*</b>
<b>Net beneficiaries</b>						<b>1,5%*</b>

\*as a % of US GDP

Source: Tax Foundation and US Census Bureau

Note: Tax Foundation Special Report on "Federal Tax Burdens and Spending by State: 1980-2005" (2007) and U.S. Census Bureau's Consolidated Federal Funds Report for 2005. All yearly data in current prices and divided by GDP in current prices.

Revenue by state as calculated by Tax Foundation (2007) imposes deficit neutrality. During fiscal years in which the federal government runs deficits some spending is necessarily financed through borrowing. This creates implicit tax liabilities for states that must be repaid eventually. To incorporate these implicit tax liabilities into the analysis, the study of the tax foundation used the following adjustment to state tax burdens. First, the total federal tax burden was increased by the size of the federal deficit. Second, this total burden was allocated among states based on each state's proportion of the actual federal 'tax burden'.

**Source:**

Table A1.4: Federal Taxation and Spending by US State, 2009-2010 average

2009-2010 average	Average revenue paid to the federal budget (\$ thousands)	Average spending received from the federal budget (\$ thousands)	Average GDP (\$ thousands)	Average net transfers (\$ thousands)	Average net transfers (as a share of average GDP)
Alabama	13,687,690	56,272,000	172,393,000	-42,584,310	-25%
Alaska	3,905,466	12,268,500	51,602,500	-8,363,034	-16%
Arizona	24,191,273	63,685,000	245,541,500	-39,493,727	-16%
Arkansas	23,926,900	28,464,500	108,598,000	-4,537,600	-4%
California	218,219,235	332,420,000	1,929,893,500	-114,200,765	-6%
Colorado	32,191,709	47,858,000	252,402,500	-15,666,291	-6%
Connecticut	35,720,562	54,499,000	231,893,000	-18,778,438	-8%
Delaware	11,945,243	8,029,000	56,859,000	3,916,243	7%
District Of Columbia	17,597,454	61,319,500	104,271,000	-43,722,046	-42%
Florida	84,067,912	183,795,500	725,144,000	-99,727,588	-14%
Georgia	46,543,001	89,217,500	407,473,500	-42,674,499	-10%
Hawaii	5,043,104	19,920,000	66,184,500	-14,876,896	-22%
Idaho	4,698,180	14,042,500	54,745,000	-9,344,320	-17%
Illinois	92,617,276	109,623,000	644,828,000	-17,005,724	-3%
Indiana	34,571,180	59,936,500	272,858,500	-25,365,320	-9%
Iowa	13,651,447	28,664,000	139,162,500	-15,012,553	-11%
Kansas	16,194,501	29,309,000	123,558,000	-13,114,499	-11%
Kentucky	18,863,889	56,763,000	161,246,500	-37,899,111	-24%
Louisiana	29,217,319	52,926,500	221,369,500	-23,709,181	-11%
Maine	4,433,730	14,553,500	50,894,000	-10,119,770	-20%
Maryland	37,851,268	96,166,000	310,289,000	-58,314,732	-19%
Massachusetts	60,455,450	82,112,000	391,376,500	-21,656,550	-6%
Michigan	41,327,618	91,118,500	377,016,000	-49,790,882	-13%
Minnesota	58,851,149	44,357,000	265,828,000	14,494,149	5%
Mississippi	6,073,238	32,262,000	93,405,500	-26,188,762	-28%
Missouri	37,622,780	68,860,500	254,331,000	-31,237,720	-12%
Montana	3,132,019	10,555,500	36,613,000	-7,423,481	-20%
Nebraska	14,525,149	16,661,500	89,000,000	-2,136,351	-2%
Nevada	8,840,797	19,832,500	120,339,500	-10,991,703	-9%
New Hampshire	6,857,818	11,555,500	61,502,000	-4,697,682	-8%
New Jersey	93,627,274	80,291,000	493,360,000	13,336,274	3%
New Mexico	5,731,156	27,715,000	82,577,000	-21,983,844	-27%
New York	161,467,322	198,639,500	1,174,831,500	-37,172,178	-3%
North Carolina	43,298,845	88,290,500	415,164,500	-44,991,655	-11%
North Dakota	3,507,146	8,819,000	33,809,500	-5,311,854	-16%
Ohio	89,187,818	105,811,000	485,432,500	-16,623,182	-3%
Oklahoma	19,117,049	38,358,500	150,524,500	-19,241,451	-13%
Oregon	17,176,009	33,787,000	185,477,500	-16,610,991	-9%
Pennsylvania	86,797,577	142,907,500	581,166,500	-56,109,923	-10%
Rhode Island	9,119,493	11,600,000	48,428,500	-2,480,507	-5%
South Carolina	12,357,102	47,454,500	161,941,000	-35,097,398	-22%
South Dakota	3,659,961	9,575,500	37,959,500	-5,915,539	-16%
Tennessee	35,063,717	67,195,500	250,726,000	-32,131,783	-13%
Texas	155,605,021	221,052,000	1,207,872,000	-65,446,979	-5%
Utah	10,496,540	22,942,000	116,841,000	-12,445,460	-11%
Vermont	2,582,238	7,088,500	25,910,000	-4,506,262	-17%
Virginia	46,833,414	131,940,500	413,695,500	-85,107,086	-21%
Washington	39,220,903	69,709,000	355,402,500	-30,488,097	-9%
West Virginia	4,378,774	20,988,000	64,431,500	-16,609,226	-26%
Wisconsin	31,010,618	53,711,500	250,070,000	-22,700,882	-9%
Wyoming	3,013,563	6,358,500	39,082,000	-3,344,937	-9%
<b>United States</b>	<b>1,880,075,901</b>	<b>3,238,713,500</b>	<b>14,595,321,500</b>	<b>-1,358,637,599</b>	<b>-9%</b>
<b>Net contributors</b>					<b>-9.2%*</b>
<b>Net beneficiaries</b>					<b>0.2%*</b>
<b>Deficit/Surplus</b>					<b>-9.0%*</b>

Source: Internal Revenue Service (IRS) for revenues, Census Bureau for expenditure and US bureau of Economic Analysis for regional GDP. All data in current prices.

Note: We use data from fiscal years 2009 and 2010 only because the US Census Bureau has suspended the publication of reports since 2010. Data on expenditure tracks down the near entirety of expenditure of the federal government by State and category of spending (social security, grants, procurement, salaries and wages of federal workers), with the exception of federal interest payments and payments abroad. Data on federal taxes include all individual, payroll, corporate, estate, gift and excise taxes. Total taxes collected are calculated simply by deducting refunds from each year's gross collections.