

Centre de Referència en Economia Analítica

Barcelona Economics Working Paper Series

Working Paper n° 343

**Addressing the net balances problem as a prerequisite
for EU budget reform: A proposal**

Angel de la Fuente, Rafael Doménech and Vasja Rant

February 2008

**Addressing the *net balances* problem as a prerequisite for EU budget reform:
A proposal***

Angel de la Fuente (Instituto de Análisis Económico, CSIC)

Rafael Doménech (Oficina Económica del Presidente and Universidad de Valencia)

Vasja Rant (Faculty of Economics, University of Ljubljana)

February 2008

Abstract

Conflict among member states regarding the distribution of net financial burdens has been allowed to contaminate the entire design of the EU budget with very negative consequences in terms of equity, efficiency and transparency. To get around this problem and pave the way for a substantive budget reform, we propose to decouple distributional negotiations from the rest of the budget process by linking member state net balances in a rigid manner to relative prosperity. This would be achieved through the introduction of a system of compensating horizontal transfers that would take to its logical conclusion the Commission's proposal for a generalized compensation mechanism. We discuss the impact of the proposed scheme on member states' incentives and illustrate its financial implications using revenue and expenditure projections for 2013 that are based on the current Financial Perspectives and Own Resources Decision.

Keywords: EU budget
JEL Classification: H87

* This paper is part of a research project co-financed by the ERDF and Fundación Caixa Galicia. Additional financial support from the Spanish Ministry of Education under research grants SEJ2005-06357 and SEJ2005-01365 is also gratefully acknowledged. The views expressed in the paper are exclusively those of its authors and do not in any way represent the official position of the Spanish government.

1. Introduction

In its 2005 Brussels meeting the European Council unanimously approved to undertake a comprehensive review of the EU budget that would cover all expenditure programmes as well as the Union's financing system. This agreement can be seen as a manifestation of a widespread dissatisfaction with the structure and outcomes of the European budget process that is shared both by the governments of member states and by independent commentators.

There seems to be an emerging consensus that the EU budget, as it stands, does not adequately meet Europe's needs and challenges. While there is certainly disagreement about specifics, many policymakers and analysts do agree that way too much money is being spent on certain things and not nearly enough on others and have questioned the value added of different expenditure programmes.¹ In addition, the EU budget has often been criticized for its lack of transparency for European citizens and even member governments and for the questionable distribution of net financial burdens that it achieves. General rules on the distribution of expenditures and financial contributions across member states are often violated by ad-hoc exceptions that introduce a considerable degree of complication and arbitrariness. Partly as a result of these exceptions and partly due to the nature of EU expenditure programmes, member states with similar income levels often end up with very different net financial positions.

But if this is widely accepted, why has there not been a serious budget reform for the last twenty years? The answer to this question brings us to a serious structural problem that needs to be solved before we can hope to make any progress on more substantive issues. Its essence is that conflict among member states over the distribution of net financial burdens has been allowed to condition the design of the entire European budget.

The first part of this note briefly discusses the nature of what we will call for short *the net balances problem* and explores its implications for the EU budget process. Building on de la Fuente and Doménech (2001), we then advance a proposal for a reform of the Union's finances that should alleviate this problem and help bring about a more equitable and efficient budgetary policy.

2. The net balances problem and its implications

The basic design of the European budget, on both its expenditure and revenue sides, is decided at an intergovernmental meeting, the European Council, where all actors have veto power. Experience has shown that member states' behaviour in budget negotiations has often been driven by concerns over their net financial returns, understood in a very narrow sense as the difference between their respective contributions to the financing of the Union and the return flow of expenditures in their territory that are financed by the European budget. As a result, Council meetings have been dominated by distributional issues and member states have not

¹ Among many others, see Begg (2005), Sapir et al (2003), Boldrin and Canova (2001) and DEFRA (2005). The first two references include general analyses of the deficiencies of the EU budget and the last two are very critical discussions of the two core EU policies: cohesion and agriculture.

hesitated to threaten to block budget agreements in order to protect their perceived national interests. Needless to say, this has made negotiations rather complicated. More importantly, the ongoing distributional conflict among member states has seriously distorted budget outcomes in ways that involve large losses in the efficiency, equity and transparency of EU finances.

A key obstacle to substantive budget reform,

Perhaps the most important cost of the net balances problem is that it has been a very serious obstacle to substantive budget reform. A clear illustration can be found in the negotiations leading to the approval of the last two multi-annual EU budgetary frameworks (the so-called financial perspectives). In both cases there was widespread agreement on the need to devote additional resources to areas of common European interest in order to respond to the economic and political challenges posed by a changing international environment. In both cases what were in fact rather timid proposals by the Commission for increased funding in key areas had to be severely curtailed. The required money simply could not be found because net contributors blocked any increase in the overall budget ceiling for fear of having their deficits increased, and the main beneficiaries of existing expenditure programmes or financing privileges strongly resisted any attempt to curtail their funding. As a result, the final outcome looked very much like the status quo with only marginal changes in the structure of the budget.

with a heavy cost in terms of simplicity and transparency

A second important cost is that the side payments necessary to secure the approval of a financial package have resulted in an increasingly complex and untransparent budget, riddled with preferential clauses and ad-hoc exemptions to general rules that would be very difficult to explain to the average European citizen.

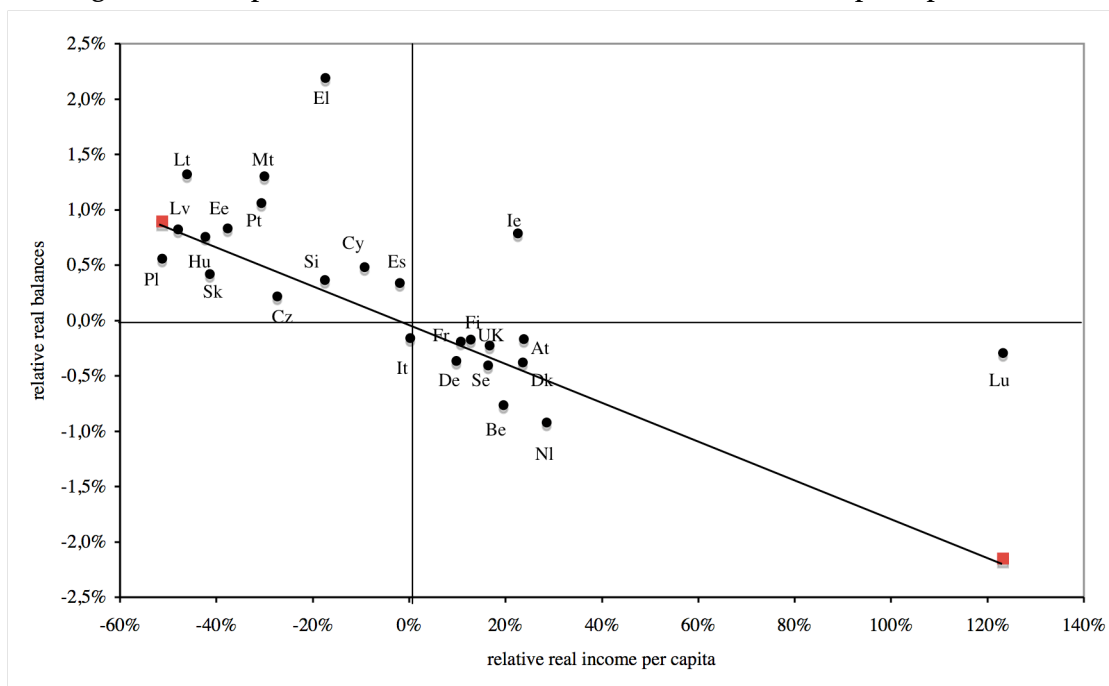
As the situation stands now, there is a rather big and questionable exception on the revenue side of the budget -- the rebate to the UK of two thirds of its ex-ante deficit-- which involves additional exceptions through the discounts granted to Austria, Germany, Sweden and the Netherlands in the financing of the rebate. In addition, these four countries enjoy reduced rates of payment for the part of their national contributions that is linked to the VAT base and two of them have been granted special reductions in their GNI-based contributions. On the expenditure side, the situation is not very different, particularly in connection with the allocation of cohesion funding. The current financial perspectives are full of special provisions in favour of specific countries or regions that violate the general allocation rules set out in the same document (see CEU 2005). These special provisions affect at least 16 of the member states of the EU.

which does not guarantee an equitable distribution of net financial burdens

Such messiness might be acceptable if it served to achieve an equitable distribution of net financial burdens among member states. Looking at the numbers, however, it is hard to argue that this has been the case.

Figure 1 shows the relationship between member states' relative prosperity and their net financial positions in 2006. As an indicator of relative prosperity we use income per capita in *normalized PPS units*² (roughly speaking, in euros of average purchasing power) measured in percentage deviations from the EU average. Financial positions are measured by what we call *per capita relative real balances*. To construct this variable, we first compute each country's per capita net balance by subtracting its contribution to the EU from EU expenditures allocated to it, with both variables measured in normalized PPS units per capita. From this we subtract the average per capita net balance of the entire EU, which will generally be negative because certain types of expenditure (like foreign aid) cannot be allocated to any member country. Finally, the result of these calculations is normalized by average EU income per capita in normalized PPS units.

Figure 1: Per capita relative real balances vs. relative real income per capita in 2006



- Key: At = Austria; Be = Belgium; Cy = Cyprus; Cz = Czech Republic; De = Germany; Dk = Denmark; Ee = Estonia; El = Greece; Es = Spain; Fi = Finland; Fr = France; Hu = Hungary; Ie = Ireland; It = Italy; Lt = Lithuania; Lu = Luxembourg; Lv = Latvia; Mt = Malta; Nl = Netherlands; Pl = Poland; Pt = Portugal; Se = Sweden; Si = Slovenia; Sk = Slovakia; UK = United Kingdom.

Applied to the case at hand, commonly accepted notions of equity would require that net financial burdens should be distributed in proportion to ability to pay. Hence, richer member states should pay more than poor ones, and countries with the same level of real income should have similar financial positions. The figure shows that the EU budget roughly meets the first of these criteria but certainly not the second.

The negative slope of the regression line we have fitted to these data (weighting countries by population) indicates that the net effect of the EU budget is redistributive, as relative balances

² Throughout the paper, we have renormalized member state relative price indices so that the price level of the EU as a whole is equal to 1 in each year. We apply the same correction to income levels and budget flows expressed in PPS units to convert them to "normalized PPS units."

are on average positive in poor countries and negative in rich ones. The slope of this line, which we will call the *redistribution coefficient*, is 0.0175. Given the definition of our variables, this parameter indicates that, for a representative European citizen, the net effect of the EU budget is equivalent to a flat tax of 1.75% levied on the difference between his income (adjusted for purchasing power differences) and the EU average -- or to a subsidy of the same magnitude if his income is below the average.

On the other hand, countries of similar wealth often end up with very different financial positions. Greece, Ireland and Luxembourg are extraordinarily well treated given their income levels. France and Germany have approximately the same income per capita, but the latter's deficit is roughly twice the size of the former's. The same is true of the UK and Sweden or Austria and Denmark. On the opposite end of the income scale, the per capita surpluses of Greece and Malta are six times larger than those of Slovenia and the Czech Republic.

3. The way forward: changing incentives by isolating redistributive issues

The European Commission and many analysts have argued repeatedly that net fiscal balances are a risky accounting exercise that, at best, captures in a rather imperfect way only a small part of the benefits of membership in the European Union.³ While this is certainly true, we argue that these balances cannot be ignored. However imperfectly, they do measure the most visible and easily quantifiable aspect of such benefits. As a result, the views of European citizens and member state governments on the overall fairness of the system are likely to depend critically on the extent to which the distribution of such balances is perceived to be reasonable. And however misguided this concern may be in some cases, it is unlikely that we can make it go away just by preaching about the need to take a broader view of national interests.

A more realistic approach to the problem is to take member states' concern with net balances as given and ask what can be done to minimize its undesirable side effects. A possible way out of the current deadlock would be to change the structure of the EU budgetary system in such a way that the unavoidable conflict over distributional issues can be isolated and does not spill over into the rest of the budget discussion. This requires the introduction of a new budgetary instrument that can be used to neutralize the undesired distributional consequences of core EU policies. The logical choice would seem to be a system of horizontal transfers across member states. In our opinion, such a system should be designed to link member country net balances rigidly to their levels of relative prosperity.

We believe the adoption of such a system would help improve the equity and transparency of the EU budget while opening the way for significant efficiency gains by changing member government incentives in a manner that would make substantive reform possible. A simple rule linking net balances to per capita income levels would greatly simplify the European budget and increase its transparency by eliminating the need to distort expenditure policies in order to achieve an acceptable distribution of net financial contributions. It would also ensure that this

³ See for instance CEC (1998 and 2004).

distribution will be in strict accordance with a simple equity principle that is easy to explain and can be supported by a large majority of European citizens.

More importantly for our purposes here, the introduction of such a rule would also radically change member governments' incentives in budget negotiations. Under the current situation EU expenditures are perceived as having an almost zero marginal cost to national treasuries. Hence, member state representatives enter Council meetings with an incentive to fight for every possible increase in spending favoring their country -- and this includes programs they would probably not be willing to finance with their own budgets. If net balances are set in advance, so that expenditure gains in any given program will have to be financed at the margin by national budgets, this perverse incentive disappears.

This has two important implications. The first one is that funding for horizontal programmes can be allocated more efficiently because the Council or the Commission need not worry about their impact on member state net balances. The second is that national governments are likely to become more selective in their support for EU activities. Although we believe that this would be a positive development in general terms, there is some risk that it may lead to the curtailment of those programs that are valued more by the Commission than by member states. To the extent that the Commission defends truly European interests, rather than national ones, this would be an undesirable outcome.

4. A specific proposal and its financial implications

In its 2004 report on the financing of the Union (CEC 2004), the European Commission has called for the introduction of a generalized compensation mechanism for member countries experiencing "excessive deficits." The Commission's central proposal essentially involves extending a streamlined version of the UK rebate to all net contributors in a similar situation. Member countries experiencing deficits over 0.35% of GNI would be granted a rebate of two thirds of the excess over this threshold. These rebates would be financed by all member states in proportion to their national income. The total amount of compensatory payments would be capped at 7.5 billion euros. If this maximum amount were to be exceeded, rebate rates would be reduced in the proportion needed to respect the cap.

While the Commission's proposal would be a step in the right direction, in our opinion it does not go far enough. It tackles only one side of the problem (excessive deficits but not excessive surpluses), it does so only partially and without taking into account the relative prosperity of net contributors and introduces an unnecessary discontinuity in the form of a fixed deficit threshold below which no corrective action would be taken. As a result of all this, its contribution to budget equity will be quite limited, as it will mitigate but not eliminate differences of treatment across member states only at one tail of the income distribution. Its effects on incentives will also be reduced by its limited applicability to a small subset of member countries, by the capping mechanism and by the threshold and partial rebate features.

Our proposal involves taking the principle behind the Commission's proposal to its logical conclusion. This principle, which was already established in the 1984 Fontainebleau Council,

requires that no member state should sustain a budgetary burden that is excessive in relation to its relative prosperity. The simplest and most straightforward way to achieve this is to make sure that budgetary burdens, measured in net terms, are proportional to relative prosperity.

Hence, we would advocate the establishment of a budgetary rule that would make relative real balances per capita, as defined above, inversely proportional to member states' relative income per capita in real terms (in PPS units) measured in deviations from the EU average. In terms of Figure 1, our proposal would amount to making sure that all countries are on the estimated regression line, or on some other agreed upon line going through the origin.

This can be achieved through a system of horizontal transfers across member states that would fully compensate any deviations from the desired allocation rule that would result from the standard financing mechanisms of the Union and from its expenditure policies. These compensating transfers would be calculated and paid following the same procedures that are now used in the case of the UK rebate. A first estimate of the compensatory transfer corresponding to year t would be paid at $t+1$ and final settlement would come at $t+4$, with the possibility of intermediate corrections as the final data required for the calculation become available.

Under this scheme, all member states with real incomes below the EU average would receive a net transfer from the richer members of the Union. Such transfers should, however, be subject to strict conditionality and additionality requirements to ensure that they are used to finance growth-enhancing investments that will help mitigate income disparities. To achieve this, allocations under cohesion policies should be at least equal to the desired final net balances for all countries with below average incomes. In addition, these countries should not be allowed to use compensatory transfers as a way to free up cohesion funds for consumption purposes. To prevent this, compensating transfers should be calculated on the basis of expected rather than actual cohesion policy disbursements.

Adopting the procedure we have just outlined would effectively split budget negotiations into two separate parts. On the one hand, member countries will have to bargain over the desired level of financial solidarity, as measured by the redistribution parameter that links net balances to relative income (that is, by the slope of the regression line shown in Figure 1). On the other, expenditure programmes and the standard financing mechanism of the Union will have to be discussed. The main advantage of the setup is that member countries will be able to think about how much money the Union needs and how it should be spent without the distraction of worrying about how such decisions will affect their own finances.

As shown in the Appendix, the final contribution of each member state to the EU budget (net of compensatory transfers) under the proposed scheme will be approximately equal to the sum of three components.⁴ The first two amount to full repayment of all EU expenditure allocated to the country and the equal per capita sharing in real terms of "overhead" or general-interest EU expenditures (including external action and administration). The last component will be a

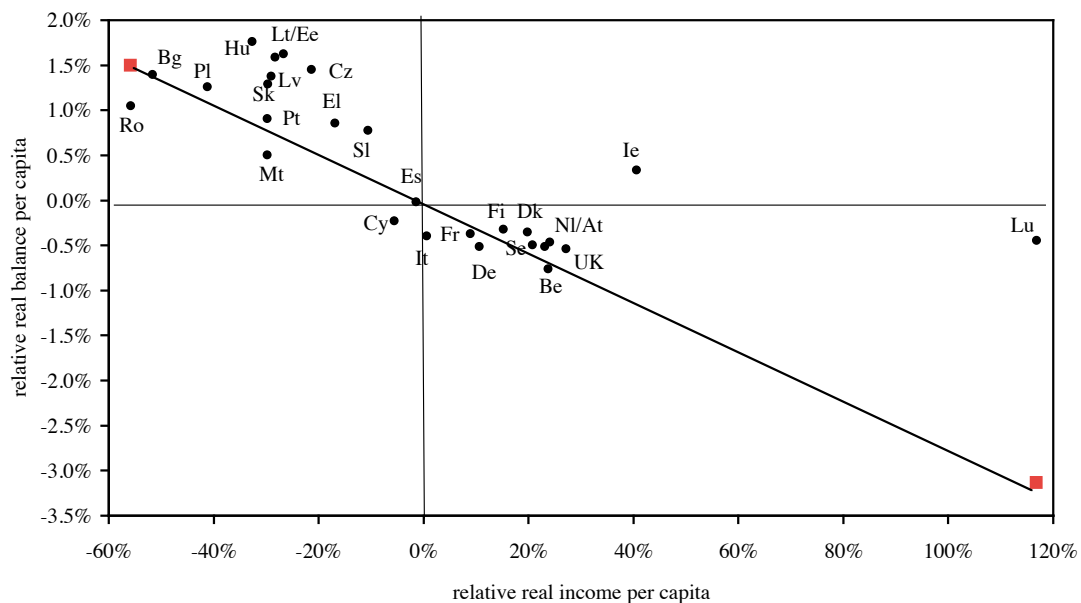
⁴ The equality is not exact because compensatory transfers, which are estimated in real terms, have to be adjusted so that they add up to zero when measured in current euros. See the Appendix.

redistributive payment whose per capita amount will be a function of the difference between the country's real income per capita and the EU average. Hence, the marginal cost to a member state of allocated expenditure will be equal to one, unlike in the present system where it is considerably below one since all countries basically finance all EU expenditures in proportion to their share in nominal aggregate income. As a result, member countries will have no incentive to approve expenditures they would not be willing to finance with their own budgets and will have the correct incentives to channel through the European budget only those programmes where the EU can provide some added value.

Financial implications: a tentative estimate

To illustrate the financial implications of our proposal, we will use the estimates of budget flows across EU member states in the final year of the current Financial Perspectives that we have constructed in a companion paper (de la Fuente, Rant and Doménech, DRD 2008) working with the country allocations established in those Perspectives (CEU, 2005), the Commission's growth forecasts contained in the Aging Report (ECP, 2006) and our own projections of the evolution of relative prices in EU member states. Needless to say, the exercise is extremely risky but it will give us an idea of the order of magnitude of the required transfers and of the expected direction in which they will flow.

Figure 2: Per capita relative real balances vs. relative real income per capita in 2013



- Key: Bg = Bulgaria; Ro = Romania. See Figure 1 for the rest.
- Source: de la Fuente, Rant and Doménech (2008).

Figure 2 shows the relationship between member states' expected relative per capita real balances and expected real income per capita in 2013 along with the fitted regression line that captures the average degree of redistribution through the EU budget. The value of the redistribution coefficient for this year (2.68%) is relatively low by historical standards (see

DRD 2008) but considerable higher than the extremely low values observed in the transition years following Eastern enlargement.

**Table 1: Estimated excess balances and compensating transfers, 2013
keeping constant the observed level of redistribution (at 2.68%)**

	<u>Excess balances</u>				<u>Compensating transfers</u>	
	<i>1. per capita as a % of EU avge. GNlpc</i>	<i>2. per capita in PPS units</i>	<i>3. total in million PPS</i>	<i>4. relative price index</i>	<i>5. total in meuros</i>	<i>6. adjusted total in meuros</i>
<i>Luxembourg</i>	2.69%	723.9	355	1.06	-375	-392
<i>Ireland</i>	1.43%	384.9	1,718	1.17	-2,007	-2,099
<i>Estonia</i>	0.91%	245.3	317	0.72	-228	-238
<i>Hungary</i>	0.89%	239.3	2,369	0.69	-1,643	-1,718
<i>Czech Rep.</i>	0.88%	236.7	2,381	0.72	-1,721	-1,799
<i>Lithuania</i>	0.83%	224.2	738	0.65	-479	-500
<i>Latvia</i>	0.60%	161.5	355	0.66	-234	-245
<i>Slovenia</i>	0.50%	133.5	269	0.82	-222	-232
<i>Slovakia</i>	0.49%	133.2	710	0.68	-479	-501
<i>Greece</i>	0.41%	109.2	1,239	0.89	-1,097	-1,147
<i>UK</i>	0.19%	51.1	3,146	1.11	-3,482	-3,641
<i>Austria</i>	0.19%	49.9	415	1.05	-438	-458
<i>Denmark</i>	0.18%	48.5	266	1.21	-323	-338
<i>Poland</i>	0.15%	41.6	1,563	0.67	-1,041	-1,089
<i>Netherlands</i>	0.11%	29.7	501	1.07	-535	-560
<i>Portugal</i>	0.11%	29.2	313	0.85	-267	-279
<i>Finland</i>	0.09%	23.5	125	1.11	-139	-145
<i>Sweden</i>	0.07%	17.5	163	1.13	-184	-193
<i>Bulgaria</i>	0.01%	2.8	20	0.51	-10	-11
<i>Spain</i>	-0.06%	-14.9	-670	0.96	640	611
<i>Belgium</i>	-0.12%	-33.5	-356	1.06	376	359
<i>France</i>	-0.13%	-34.0	-2,183	1.05	2,298	2,194
<i>Germany</i>	-0.23%	-61.2	-5,072	1.05	5,308	5,066
<i>Malta</i>	-0.29%	-79.3	-34	0.78	27	25
<i>Cyprus</i>	-0.38%	-101.8	-83	0.91	75	72
<i>Italy</i>	-0.38%	-102.8	-6,029	1.02	6,127	5,848
<i>Romania</i>	-0.45%	-120.2	-2,538	0.58	1,478	1,411
<i>total extra contributions due:</i>			16,964		14,905	15,584
<i>total positive transfers due:</i>			16,964		16,327	15,584
<i>transfers - contributions</i>					1,423	
<i>adjustment factor</i>					4.55%	
<i>new entrants</i>						-4,825
<i>cohesion 4</i>						-2,914
<i>rest of EU15</i>						7,739

- Note: Columns 5 and 6 in millions of 2004 euros.

As a starting point, we will take as given the existing degree of redistribution through the European budget and calculate the amount of the compensating transfers that would be required to move all countries to the estimated redistribution line. Table 1 shows the results of this calculation. Column 1 shows member countries' *excess balances* measured as a fraction of

average EU GNI per capita in normalized PPS units. Excess balances are defined as the difference between observed and desired relative balances. In graphical terms, they correspond to the vertical distance between the fitted regression line and the dot representing each country's position in Figure 2. Column 2 converts these amounts to normalized PPS units per capita. Multiplying these figures by each country's population, we obtain its total excess balance in PPS units, which is shown in column 3. Next, we multiply this amount by the index of relative country prices shown in column 4 and change its sign to obtain a preliminary estimate of the compensating transfer due to each country expressed in nominal terms (in euros of 2004). Hence, countries with positive excess balances would be assigned negative transfers, that is, would have to pay additional contributions to eliminate their excess balances.

A complication that arises at this point is that while excess balances in normalized PPS units add up to zero by construction (because they are the residuals of a regression), compensating transfers in current euros do not necessarily do so. The difference between the first round estimates of total positive net transfers and total extra contributions under the compensation scheme is calculated in the lower part of the table and amounts to 1.4 billion euros. To get things to balance, we reduce all transfers and increase all contributions in the uniform proportion required for net payments to add up to zero. The value of the adjustment coefficient that will do the trick is 4.55%.⁵

Adjusted compensating transfers are shown in column 6. The bottom part of this column shows the implications of the compensating transfer scheme for three groups of countries. Those countries that joined the Union in 2004 and 2007 would collectively lose 4.8 billion euros while the traditional cohesion countries or C4 (Spain, Ireland, Portugal and Greece) would have to pay additional contributions amounting to 2.9 billion. These payments would finance a net transfer of 7.7 billion to the remaining members of the EU15.

There would be both winners and losers in each group of countries. Within the new entrants, Romania, Malta and Cyprus would receive positive compensating transfers, as would Spain within the second group. As for the group of richer countries, Luxembourg, the UK, Austria, Denmark, the Netherlands, Finland and Sweden would have to increase their net contributions, while Germany, France, Italy and Belgium would be entitled to significant refunds.

Our results indicate that the wealthier member states would be the main beneficiaries of the implementation of the compensation scheme if the expected degree of redistribution in the year of reference were to be held constant. If this outcome is deemed undesirable, the redistribution coefficient should be raised. Table 2 illustrates the sensitivity of the net positions of the three groups of member states mentioned above to changes in the redistribution coefficient and shows the total cost of the scheme as measured by the total amount of positive (or negative) compensating transfers. An increase in the redistribution coefficient to 3.0% would reduce the

⁵ Let T be total (positive) transfers due and C total extra contributions (negative transfers). Since the required transfers exceed contributions, we have

$$(1) T - C = X > 0.$$

We seek the value of the adjustment factor a such that

$$(2) (1-a)T - (1+a)C = 0.$$

Substituting (1) into (2) and solving for a , we have

$$a = X/(T+C).$$

net cost to new entrants to 2.2 billion. A further increase to 3.5% would make the scheme neutral for the richer group of countries as a whole and would result in a transfer of 1.7 billion from the C4 (mostly from Ireland) to the Eastern European joining states. Increasing the redistribution coefficient would also raise the total cost of the scheme but only modestly, at least within the range of values contemplated in Table 2, because increasing transfers to the poorer member states tends to be relatively cheap in nominal terms due to their low price levels.

Table 2: Sensitivity of results to changes in the redistribution coefficient

<i>redistr. coefficient =</i>	<i>2.68%</i>	<i>3.00%</i>	<i>3.50%</i>	<i>4.00%</i>
<i>total transfers to groups of member countries:</i>				
<i>new entrants</i>	-4,825	-2,238	1,832	5,990
<i>cohesion 4</i>	-2,914	-2,452	-1,739	-1,031
<i>rest of EU15</i>	7,739	4,690	-94	-4,959
<i>total volume of transfers</i>	15,584	15,697	17,504	19,507

In our opinion, a good case can be made for raising the redistribution coefficient to a level around 3.5%. As noted, a lower redistribution coefficient would imply that compensating transfers would flow on balance from poor to rich countries, which may be difficult to justify. In addition, such a change would still leave us far below the levels of redistributive effort that prevailed in the years immediately preceding Eastern Enlargement, which ranged between 5% and 6%. Table 3 shows the detailed implications of the compensating scheme with a 3.5% redistribution coefficient. One of the main changes relative to the scenario described in Table 1 is that compensating transfers to Poland, Bulgaria and Portugal change sign and become positive.

The estimated volume of compensating transfers is considerable in both scenarios. Under the assumptions underlying Table 3 the total transfer of resources across member states would amount to 17.5 billion euros at 2004 prices, which is more than twice the maximum cost contemplated by the Commission in its proposal for a generalized compensation mechanism. Column 6 shows the impact of estimated compensating transfer on each state's total contributions to the Union. Some of the required transfers are also quite large when measured in this manner. For instance, the UK's 6.9 billion contribution to the compensating scheme would amount to a 40% increase in its total payments into the EU budget, while Poland's 1.2 billion refund would reduce its net contribution by over 35%. Since the figures are even higher for some other member states, it would be advisable to phase in compensatory transfers over a relatively long period. We would argue for a 10-year transitory period during which the "call rate" on the theoretical value of the compensating payments would rise in even steps from 10% to 100%. We would expect that changes in expenditure and revenue policies during this period would reduce the volume of compensating transfers to values significantly below those shown in our illustrative tables.

Table 3: Estimated excess balances and compensating transfers, 2013
Increasing the level of redistribution to 3.5%

	<i>Excess balances</i>			<i>Compensating transfers</i>		
	<i>1. per capita as a % of EU avge. GNIpc</i>	<i>2. per capita in PPS units</i>	<i>3. total in million PPS</i>	<i>4. total in meuros</i>	<i>5. adjusted total in meuros</i>	<i>6. implied % chge. in total contributions</i>
<i>Luxembourg</i>	3.64%	981.1	481	-509	-468	296.9%
<i>Ireland</i>	1.76%	474.2	2,117	-2,473	-2,273	145.9%
<i>Czech Rep.</i>	0.70%	189.4	1,905	-1,377	-1,266	77.4%
<i>Estonia</i>	0.69%	186.3	241	-173	-159	97.5%
<i>Hungary</i>	0.62%	167.3	1,656	-1,148	-1,055	75.9%
<i>Lithuania</i>	0.60%	161.8	533	-345	-317	86.1%
<i>UK</i>	0.41%	110.8	6,819	-7,549	-6,938	40.6%
<i>Slovenia</i>	0.41%	110.0	222	-183	-168	39.6%
<i>Austria</i>	0.38%	102.9	856	-902	-829	31.8%
<i>Latvia</i>	0.36%	97.3	214	-141	-130	60.5%
<i>Denmark</i>	0.34%	92.2	506	-614	-564	26.2%
<i>Netherlands</i>	0.30%	80.6	1,358	-1,452	-1,335	26.5%
<i>Greece</i>	0.27%	72.0	817	-723	-665	30.1%
<i>Slovakia</i>	0.25%	67.9	361	-244	-224	35.0%
<i>Sweden</i>	0.23%	63.1	587	-663	-610	22.5%
<i>Finland</i>	0.21%	56.9	303	-336	-309	18.3%
<i>Belgium</i>	0.07%	18.7	199	-210	-193	4.3%
<i>France</i>	-0.05%	-14.3	-919	968	1,046	-5.6%
<i>Spain</i>	-0.07%	-18.0	-811	775	837	-8.1%
<i>Portugal</i>	-0.14%	-36.6	-393	335	362	-22.6%
<i>Germany</i>	-0.14%	-38.0	-3,147	3,293	3,559	-15.5%
<i>Poland</i>	-0.18%	-49.2	-1,850	1,232	1,332	-35.5%
<i>Italy</i>	-0.38%	-101.6	-5,961	6,057	6,547	-41.6%
<i>Bulgaria</i>	-0.41%	-111.0	-806	413	446	-97.5%
<i>Cyprus</i>	-0.42%	-114.1	-92	84	91	-47.4%
<i>Malta</i>	-0.54%	-145.1	-63	49	53	-70.7%
<i>Romania</i>	-0.90%	-243.1	-5,133	2,989	3,230	-234.9%
<i>total extra contributions due:</i>			19,175	19,044	17,504	
<i>total positive transfers due:</i>			19,175	16,195	17,504	
<i>transfers - contributions</i>				-2,849		
<i>adjustment factor</i>				-8.08%		
<i>new entrants</i>					1,832	-17.1%
<i>cohesion 4</i>					-1,739	11.0%
<i>rest of EU15</i>					-94	0.1%

- Note: Columns 4 and 5 in millions of 2004 euros.

5. How should net balances be calculated?

The estimates of net budget balances we have used in our illustrative calculations have been constructed using essentially the same procedure the European Commission currently follows to allocate its revenues and expenditures to member countries.⁶ We have proceeded in this manner for simplicity and to facilitate the comparison of our figures with other estimates of

⁶ See for instance Annex IV of CEC (2007).

member country budgetary imbalances. We would argue, however, that certain aspects of this procedure should be modified before it can be used for the calculation of compensatory transfers. There are two issues that need to be addressed. The first one has to do with the criteria used to allocate certain expenditure and revenue items across member states, and the second with the desired treatment of unallocated expenditure.

Regarding the first issue, the only problem that arises on the revenue side has to do with the treatment of traditional own resources (customs duties and agricultural levies net of the allowance for collection costs). We have treated these items as national contributions and assigned them to the member country that collected them, but it is clear that allocating tariff revenue on the basis of port of entry does not adequately capture the real distribution of the fiscal burden on imports.⁷ Hence, it would be preferable to allocate this revenue in proportion to GNI or to consumption.

EU expenditures are allocated among member states by the Commission's services on the basis of where the money is physically spent but this is not always a good measure of who benefits from it. One important example has to do with administrative costs: while most EU staff live and work in Belgium and Luxembourg, the work they carry out benefits all EU citizens in a similar way. As a result, it would not be reasonable to allocate their salaries only to these two countries. As the Commission itself does when calculating what it calls operating balances, we have excluded administrative expenses from our calculations so that member state net balances are unaffected by the geographical location of EU institutions.

A similar adjustment would probably make sense also in the case of other budget items that generate large external benefits outside of the immediate geographical area where they are spent (as determined by the residence of the principal recipient of each payment). In particular, expenditure on border control, security, immigration, public health, consumer protection and basic research should probably be treated in the same way as administrative expenses and excluded from the calculation of net balances for purposes of determining the amount of compensatory payments.

Finally, there is the question of how to deal with unallocated expenses, including foreign aid and other external expenditure as well as administration and the other items we have just mentioned. As it is shown in the Appendix, under our proposed scheme the per capita burden of financing unallocated expenditure (that is, expenses of general interest and overhead costs) will be equal in real terms for all member countries. In our opinion this is not an unreasonable sharing rule, but a case could also be made for the financing of such expenditures in proportion to (real or nominal) income. If this second option is considered preferable, "unallocated expenditure" should be imputed in proportion of GNI rather than ignored in the relative balance calculations.

⁷ For instance, Holland and Belgium collect a disproportionate share of traditional own resources because a large fraction of imports from outside the EU comes through their ports. This is the so-called Rotterdam or gateway effect. This effect may be partially offset by another one that would work in the opposite direction. This reverse gateway effect arises because tax rebates on agricultural exports to non-EU countries from Belgian and Dutch ports will tend to be attributed to these countries regardless of the origin of these products. Hence, export rebates should probably be allocated in proportion to the production of the relevant agricultural commodities.

6. Conclusion

We advocate the introduction of a system of compensatory transfers that will make the net balances of EU member states inversely proportional to their relative income levels and the adoption of a multi-stage budget-setting procedure consistent with it. Under the proposed system, bargaining over the desired level of redistribution would be decoupled from the rest of the budget negotiation in order to make it easier for member state governments to discuss core EU revenue and expenditure policies on their own merits and not in terms of their impact on national fiscal balances. Any discrepancies between the financial outcome of such policies and the desired distribution of net balances would be eliminated by a compensation mechanism that could take the form of a system of horizontal transfers across member states.

We have also advocated a revision of the rules currently used to allocate expenditures and contributions to member countries in order to bring such estimates closer into line with the real incidence of certain budget items for which the point of collection or the location of expenditure are not good indicators of who reaps the benefits or bears the costs.

The system we propose would have several important advantages over current practices. It would provide a transparent way of implementing the principle of cohesion without sacrificing other policy objectives. It would also reduce the scope for real or perceived inequities in the allocation of budget resources by forcing member states to negotiate over a single, easily interpretable, parameter rather than about a host of specific items that may add up to apparently arbitrary allocations. In addition, setting net balances in advance of expenditure programs will in effect force national governments to bear the marginal cost of EU expenditure, thereby increasing the incentives for a more efficient allocation of resources. These advantages do come at a cost, however. The proposed procedure may actually increase the difficulty of reaching a budget consensus by sharply reducing the margin for "horse trading" across member states, and could make it harder for the Commission to push through proposals in areas in which European and national interests do not coincide.

Appendix

This Appendix describes in detail how relative balances are calculated and discusses some of their properties and the implications of their use as part of our proposed compensating scheme. To facilitate the discussion, section 1 goes through the analysis in nominal terms. In section 2 we discuss the complications that arise when we take into account differences in price levels across countries and explain how we deal with them.

1. Relative balances in nominal terms

Let

C_i = country i 's contributions to the EU budget

AE_i = EU expenditure allocated to country i

$C = \sum_i C_i$ = total EU revenue from member state contributions

$AE = \sum_i AE_i$ = total EU expenditure allocated to member countries

NAE = total EU expenditure not allocated to member countries

N_i = country i 's population

$N = \sum_i N_i$ = total EU population

All expenditure and revenue items defined above will be measured in current euros without taking into account differences in price levels across countries. We will use lower case characters to denote per capita amounts, so that, for example

$$ae_i = AE_i / N_i$$

The EU's budget deficit will be given by

$$(1) D = C - AE - NAE.$$

Country i 's net budgetary balance (NB_i) will be defined as the difference between the expenditure allocated to it and its contribution to the EU budget, that is

$$(2) NB_i = AE_i - C_i$$

Notice that the sum of the net balances of all member countries will be generally different from zero even with a zero deficit because some EU expenditure (e.g. foreign aid) is not allocated to any member state. In particular,

$$(3) NB = \sum_i NB_i = \sum_i AE_i - \sum_i C_i = AE - C = -(NAE + D)$$

where we have made use of equation (1).

Relative budgetary balances

We will work with net balances measured in relative terms. A key advantage of this procedure is that it allows budget balances to be decomposed additively into a series of partial balances that can be attributed to individual expenditure and contribution items. Since we will not make use of this decomposition in the present paper, we will focus on other properties of relative balances.

Formally, we define country i 's *per capita relative balance* with the Union as

$$(4) \text{ rnb}_i = nb_i - nb$$

where $nb = NB/N$ is the average per capita net balance of the entire Union with NB as defined in equation (3).

It is important to make explicit how relative balances deal with unallocated expenditure. Notice that country i 's total relative net balance with the Union can be written

$$(5) \text{ RNB}_i = \text{rnb}_i * N_i = (nb_i - nb) * N_i = \left(\frac{AE_i - C_i}{N_i} - \frac{AE - C}{N} \right) * N_i = (AE_i - C_i) + \frac{N_i}{N} (NAE + D)$$

where we have used (3). Equation (5) shows that a country's relative balance would be equal to its standard net balance if non-allocated expenditures and the Union's deficit were imputed to member states in proportion to their population, so that per capita allocations would be the same for all countries.

Notice that the sum of member countries' relative balance is zero:

$$(6) \sum_i \text{RNB}_i = \sum_i (AE_i - C_i) + (NAE + D) \frac{\sum_i N_i}{N} = AE - C + NAE + D = 0$$

Member states' incentives under the existing financing system

To simplify matters, let us assume that the Union's deficit is zero and that member states' contributions to the Union are strictly proportional to their national incomes so that

$$(7) C_i = cY_i$$

where Y_i is country i 's GNI and c a *call rate* that is equal for all countries. Given the dominant weight of the GNI resource and the corrections that have been introduced to bring the base of the VAT resource closer to GNI, this would be a good approximation in the absence of ad-hoc exceptions to general budget rules like the UK rebate.

To preserve budget balance, c must be set so that (ex-ante) contributions are equal to total expenditures,

$$(8) cY = AE + NAE \Rightarrow c = \frac{AE + NAE}{Y}$$

In "equilibrium" country i 's total contributions will be given by

$$(9) C_i^* = (AE + NAE) \frac{Y_i}{Y} = \left(AE_i + NAE + \sum_{j \neq i} AE_j \right) \frac{Y_i}{Y}$$

and its net balance will be

$$(10) NB_i^* = AE_i - C_i^* = AE_i - \left(AE_i + NAE + \sum_{j \neq i} AE_j \right) \frac{Y_i}{Y} = AE_i \left(1 - \frac{Y_i}{Y} \right) - \left(NAE + \sum_{j \neq i} AE_j \right) \frac{Y_i}{Y}$$

Hence, all member states contribute to the financing of all expenditures in proportion to their shares in aggregate EU income. Countries have an incentive to try to maximize their own allocated expenditure because its marginal cost is very low, particularly in small and relatively poor countries. This is true even if a dollar of such expenditure is valued less than a dollar of contributions or of direct expenditure by the national government.

Member states' incentives under the proposed compensation scheme

Under the scheme proposed in this paper, countries would pay or receive compensatory transfers that would have to be added to their regular budget contributions. The amount of the compensatory transfer payable to country i , T_i , will be given by

$$(11) T_i = N_i t_i = N_i [-\rho(y_i - y) - rnb_i] = N_i [\rho(y - y_i) - rnb_i]$$

where $-\rho$ is the slope coefficient of the redistribution regression (see Figure 1 or 2 in the text). Notice that countries receive positive transfers if their income per capita is below the Union average ($y_i < y$) and have to make additional contributions (receive negative transfers) otherwise. Operating with this expression and using equation (5)

$$(12) T_i = N_i [\rho(y - y_i) - rnb_i] = \rho(y - y_i)N_i - RNB_i = \rho(y - y_i)N_i - (AE_i - C_i) - \frac{N_i}{N}(NAE + D)$$

Now, country i 's total adjusted contributions will be given by

$$(13) C_i^{**} = C_i - T_i = C_i - \rho(y - y_i)N_i + (AE_i - C_i) + \frac{N_i}{N}(NAE + D) = AE_i + \frac{N_i}{N}(NAE + D) + \rho(y_i - y)N_i$$

and their net balances by

$$(17) NB_i^{**} = AE_i - C_i^{**} = \rho(y - y_i)N_i - \frac{N_i}{N}(NAE + D)$$

Hence, under the proposed compensating scheme, each country will pay for all expenditure allocated to it and for the fraction of "overhead expenses" (non-allocated expenditure and the budget deficit) that corresponds to it by population. In addition, there is a redistributive component of total contributions that is proportional to the country's income gap with the EU average. Net balances are independent of own allocated expenditure and depend only on the level of income and the amount of overhead expenditure.

2. Adjusting for price differences

Differences in price levels across EU member states are very important. Setting the average price level of the entire EU to 100, relative prices in 2005 ranged from Denmark's 134 to Lithuania's 50. As a result, comparisons of income levels with data in "nominal euros" can be very misleading. Similarly, expressing measures of national contributions and net balances at current national prices will not adequately capture the sacrifices or benefits they entail. To avoid these problems we have measured the income of EU member states and the budget flows across them in real terms, that is, in normalized PPS units or euros of equal purchasing power. This section shows how price corrections affect the calculations and results described in the previous section of this appendix.

We will use primes to denote variables measured in PPS units normalized so that the average price level of the EU is equal to 1 in each year. Hence, Y_i' will be country i 's real national income, i.e. GNI in normalized PPS units, and Y_i will denote the same magnitude measured in nominal terms (current euros). By construction, aggregate EU income will be the same in real and nominal terms, i.e. $Y = Y'$.

The index of relative country prices will be given by the ratio of nominal to real GNI (i.e. of GNI in current euros to GNI in normalized PPS units)

$$(15) P_i = \frac{Y_i}{Y_i'}$$

National price indices will be normalized so their weighted average is equal to one:

$$(16) P = \frac{Y}{Y'} \equiv 1 = \frac{\sum_i Y_i}{Y'} = \frac{\sum_i P_i Y_i'}{Y'} = \sum_i \frac{Y_i'}{Y'} P_i.$$

For most of our calculations it will be convenient to work with the inverse of the price index, i.e. with the relative deflator, which we will denote by Q_i :

$$(17) Q_i = \frac{1}{P_i} = \frac{Y_i'}{Y_i} \Rightarrow Y_i' = Q_i Y_i$$

Real balances

Measured in real terms, country i 's net balance will be given by

$$(18) NB_i' = NB_i Q_i = (AE_i - C_i) Q_i = AE_i' - C_i' = (ae_i' - c_i') N_i = nb_i' N_i$$

Proceeding as before, but working with real magnitudes, we can define per capita and total relative balances. We have, in particular,

$$(19) RNB_i' = nb_i' N_i$$

where relative real balances per capita are calculated as before but working with allocated expenditures and contributions measured in normalized PPS units

$$(20) \text{ } rnb_i' = nb_i' - nb'$$

and nb' is the average per capita real balance of the entire Union

$$(21) \text{ } nb' = \frac{NB'}{N} = \frac{1}{N} \left(\sum_i NB_i' \right) = \frac{1}{N} (AE' - C')$$

The only complication this introduces is that total contributions and total expenditures will generally be different from zero when measured in PPS units even if the EU budget is balanced in nominal terms. Hence, the “budget deficit” calculated with deflated figures will include a (positive or negative) price differences term that will depend on the way in which net balances are distributed across countries with high and low price levels. Using equation (3) we now have:

$$(22) \text{ } NB' = \sum_i NB_i' = \sum_i NB_i Q_i = \sum_i NB_i (Q_i - 1 + 1) = \sum_i NB_i (Q_i - 1) + \sum_i NB_i = \sum_i NB_i (Q_i - 1) + NB \\ = \sum_i NB_i (Q_i - 1) - (NAE + D) \equiv X - (NAE + D)$$

where X is the sum of national balances weighted by the corresponding relative price levels or, for short, the *price corrections* term. Notice that if $Q_i = 1$ for all i then $X = 0$.

Using this expression, country i 's relative real balance will be given by

$$(23) \text{ } RNB_i' = N_i \left(\frac{NB_i'}{N_i} - \frac{NB'}{N} \right) = N_i \left(\frac{AE_i' - C_i'}{N_i} - \frac{X - (NAE + D)}{N} \right) = (AE_i' - C_i') + \frac{N_i}{N} (NAE + D - X)$$

and its value in current euros will be

$$(24) \text{ } RNB_i' P_i = (AE_i' - C_i') P_i + \frac{N_i}{N} (NAE + D - X) P_i = (AE_i - C_i) + \frac{N_i}{N} (NAE + D - X) P_i$$

That is, working with real relative balances amounts to allocating the sum of overhead expenditures (non-allocated expenditures and the budget deficit adjusted by the price corrections term) across countries on an equal per capita basis in real terms. Hence, when we convert relative balances to nominal terms, countries with higher price levels will be allocated a greater share of overhead expenditures.

Compensatory transfers and total contributions under the proposed scheme

Under our proposal, the real compensatory transfer payable to country i , T_i , will be given in a first approximation by

$$(25) \text{ } T_i' = N_i t_i' = N_i [-\rho(y_i' - y') - rnb_i'] = \rho(y' - y_i') N_i - RNB_i'$$

Member states pay positive transfers if their *real* income per capita exceeds the Union average. Notice that compensatory transfers add up to zero in real terms because they are defined as the residuals of the redistribution regression. When transformed into nominal terms, however, they may not add up to zero and will in general have to be adjusted.

Let PT and NT be the total amounts in nominal terms of positive and negative transfers,

$$PT = \sum_{iT_i' > 0} T_i' P_i \quad \text{and} \quad NT = - \sum_{iT_i' < 0} T_i' P_i$$

To get things to balance, we will reduce all positive transfers and increase all negative ones (i.e. increase net contributions) in the same proportion, a . We seek the value of the adjustment coefficient a such that

$$(1 - a)PT = (1 + a)NT$$

Solving this equation we have

$$(26) \quad a = \frac{PT - NT}{NT + PT}$$

Hence, final compensatory payments in nominal terms to country i will be given by

$$T_i^* = \begin{cases} (1 - a)T_i' P_i = (1 - a)[\rho(y' - y_i')N_i - RNB_i']P_i & \text{if } T_i' > 0 \\ (1 + a)T_i' P_i = (1 + a)[\rho(y' - y_i')N_i - RNB_i']P_i & \text{if } T_i' < 0 \end{cases}$$

or, using equation (24),

$$(27) \quad T_i^* = \begin{cases} (1 - a) \left[\rho(y' - y_i')N_i P_i - (AE_i - C_i) - \frac{N_i}{N} (NAE + D - X)P_i \right] & \text{if } T_i' > 0 \\ (1 + a) \left[\rho(y' - y_i')N_i P_i - (AE_i - C_i) - \frac{N_i}{N} (NAE + D - X)P_i \right] & \text{if } T_i' < 0 \end{cases}$$

Now, country i 's total adjusted contributions will be given in nominal terms by

$$C_i^* = \begin{cases} C_i - (1 - a)T_i' P_i = aC_i - (1 - a) \left[\rho(y' - y_i')N_i P_i - AE_i - \frac{N_i}{N} (NAE + D - X)P_i \right] & \text{if } T_i' > 0 \\ C_i - (1 + a)T_i' P_i = -aC_i - (1 + a) \left[\rho(y' - y_i')N_i P_i - AE_i - \frac{N_i}{N} (NAE + D - X)P_i \right] & \text{if } T_i' < 0 \end{cases}$$

or

$$(28) \quad C_i^* = \begin{cases} aC_i + (1 - a) \left[-\rho(y' - y_i')N_i P_i + AE_i + \frac{N_i}{N} (NAE + D - X)P_i \right] & \text{if } T_i' > 0 \\ -aC_i + (1 + a) \left[-\rho(y' - y_i')N_i P_i + AE_i + \frac{N_i}{N} (NAE + D - X)P_i \right] & \text{if } T_i' < 0 \end{cases}$$

Since a will generally be close to zero, this expression says that, to a first approximation, each country's contribution to the Union has three components:

- full repayment for all EU expenditures allocated to it (AE_i),
- an equal per capita share in real terms of "overhead" expenditures (nominal contributions to the financing of overhead expenditures increase proportionately with the country's price level),

$$\left(\frac{N_i}{N} (NAE + D - X)P_i \right), \text{ and}$$

- a redistributive payment which is positive if the country's real income per capita is above the Union average and negative otherwise, $\rho(y_i' - y')$

References

- Begg, I. (2005). "Funding the European Union. A Federal Trust Report on the European Union's Budget." Federal Trust, London.
- Boldrin, M. and F. Canova (2001). "Income disparities and regional policies." *Economic Policy* 32, pp. 205-53.
- Commission of the European Communities (CEC, 1998). *Financing the European Union. Commission report on the operation of the own resources system*. Brussels.
- Commission of the European Communities (CEC, 2004). *Financing the European Union. Commission Report on the operation of the own resources system*. Brussels.
- Commission of the European Communities (CEC 2007). *EU budget 2006. Financial report*. Office for official publications of the European Communities. Luxembourg.
http://ec.europa.eu/budget/library/publications/fin_reports/fin_report_06_en.pdf
- Council of the European Union (CEU 2005). "Financial perspective 2007-13." Brussels.
http://www.consilium.europa.eu/ueDocs/cms_Data/docs/pressData/en/misc/87677.pdf
- de la Fuente, A. and R. Doménech (2001). "The redistributive effects of the EU budget: an analysis and a proposal for reform." *Journal of Common Market Studies* 39(2), pp. 307-30.
- de la Fuente, A., V. Rant and R. Doménech (2008). "The redistributive effects of the EU budget: an update and projections for 2007-13." Mimeo.
- Department for Environment, Food and Rural Affairs (DEFRA, 2005). *A vision for the Common Agricultural Policy*. HM Treasury. London.
- Economic Policy Committee and European Commission (ECP, 2006). *The impact of aging on public expenditure: projections for the EU25 Member States on pensions, health care, long-term care, education and unemployment transfer*. Annex. European Economy. Special report no. 1/2006.
- Sapir, A., Ph. Aghion, G. Bertola, M. Hellwig, J. Pisani-Ferry, D. Rosati, J. Viñals and H. Wallace (2003). *An agenda for a growing Europe. Making the EU economic system deliver. Report of an independent high-level study group established on the initiative of the President of the European Commission*. Brussels.
<http://www.euractiv.com/ndbtext/innovation/sapirreport.pdf>