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## Accounting for Vulnerability of African Countries in Performance Based Aid Allocation



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AFRICAN DEVELOPMENT BANK GROUP

# ***Accounting for Vulnerability of African Countries in Performance Based Aid Allocation<sup>1</sup>***

Working Paper No. 103

October 2009

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**Office of the Chief Economist**

# Abstract

Patrick Guillaumont, Sylviane Guillaumont-Jeanneney

The African Development Bank allocates its concessional resources through a procedure which is mainly based on the quality of the beneficiary countries' economic policy and governance. This allocation procedure relies mainly on the Performance-Based Allocation formula which can be criticized on two grounds. Firstly, the weight on economic policy and governance is viewed as being excessive. Secondly, it lacks transparency and consistency. We consider how to amend that formula so as to take into account certain common characteristics of many African countries. The main proposal is to augment the formula by an eco-

nomie vulnerability criterion. The numerical simulations show that the introduction of the United Nations economic vulnerability index in the formula gives rise to allocations which not only account for post conflict situations but also inherent fragility. We also consider a lower population weight in order to address the problem of country size. This change helps avoid inconsistencies arising from the application of country allocation ceilings in the various stages of the computation. Finally, a few proposals concerning the African Development Fund's support to regional integration are explored.

Keywords: Performance, Vulnerability, Aid, Allocation  
*JEL classification: O19, O11*

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## 1. Introduction

The African Development Bank Group (AfDB) allocates its development aid among its beneficiary countries through its soft loan window, the African Development Fund (ADF), using a procedure which focuses mainly on the quality of their economic policy and governance. Forty of the fifty-three AfDB Regional Member countries (RMCs) are eligible for ADF financing. These include two so-called blend countries (Nigeria and Zimbabwe), which also have access to the non-concessional window. This AfDB procedure is similar to that of other multi-lateral development banks. The precedence given to the governance criterion has been criticized in academic circles as well as the donor community. The main critique addressed to the current aid allocation formula is that it does not sufficiently take into account the characteristics of low-income countries, especially low-income African countries.

It should, however be noted that the formula used to allocate ADF-11 resources to eligible countries has improved compared to the one used under ADF-10. The new formula is clearer and has eliminated the problem of double counting of the governance factor. In addition, the establishment of the Fragile States Facility, compared to a post-conflict factor in the

old formula, better recognizes the vulnerability of the recipients (ADF 2008a). The increase in the allocation for regional operations is welcomed since most African countries are small and have very high communication costs.

Nonetheless, new adjustments can be considered with a view to taking into account the characteristics of AfDB regional member countries and enhancing its aid effectiveness (ADF 2008b). With this in mind, this paper considers the advisability of adapting the ADF allocation formula and the possible effects on the geographical distribution of ADF resources.

The remainder of the paper is divided into three parts. Section 2 focuses on development aid allocation principles and problems raised by the current allocation process, such as the weight given to performance and the treatment of small countries and fragile countries. Section 3 outlines adjustments to the allocation formula; take into account certain key features of African countries such as their economic vulnerability, their limited human capital, and their disparate size. Section 4 proposes some innovations for the treatment of regional cooperation within the context of aid allocation. An annex presents the formula for the performance-based allocation formula, proposed

amendments and results of numerical simulations, as well as some alternative measures of governance.

## 2. Aid Allocation Principles and Issues

We argue that a development aid formula should be based on three principles, which are presented in Section 2.1. Section 2.2 presents the steps of the current performance-based allocation (PBA) process. We then continue with a discussion of the weight given to the quality of economic policy and governance (Section 2.3) in the allocation process and conclude with an analysis of the challenges posed by fragile states and small countries.

### 2.1 Principles

The first principle concerns aid *effectiveness* in promoting growth and, beyond that, contributing to the Millennium Development Goals (MDGs). Here it is appropriate to consider the features of beneficiary countries that determine the effectiveness of aid they receive (World Bank 1998). It is within this purview that donors, influenced by the World Bank, have made good governance a core criterion of their allocation formula. There are, however other factors which determine aid effectiveness. For example, a coun-

try's economic vulnerability is one such factor (Guillaumont and Chauvet 2001, Chauvet and Guillaumont 2004, 2009, Guillaumont 2006, 2007, Guillaumont and Laajal 2006). In terms of effectiveness, economic vulnerability, particularly to external shocks, can be seen as an allocation criterion that is just as pertinent as the quality of economic policy and governance.

The second principle that an allocation formula should be based on is equity. A modern idea of justice, developed in particular by Rawls (1971) and Roemer (1998), is to give equal opportunities to all individuals, so that inequalities only result from differences in effort and performance. Sen (1999) develops this theory by stating that accessibility to opportunities is one of the main determinants of development. Thinking in terms of nations and not of individuals, equity thus means allowing countries equal chances of escaping poverty, and compensating for the structural handicaps which limit the effectiveness of their effort. These structural handicaps are durable features of the countries that are beyond their present political will, reflecting historical and geographical factors and the international environment. Therefore policy must consider how these can be expanded. Here again, economic vulnerability is a valid equity criterion for aid allocation, as is limited human capital

(Guillaumont 2006, 2009a). These two factors reduce in a sustainable manner, the chances of a long term economic take-off.

The third principle is *transparency*. It is important for donors to be able to appreciate the relative weight of the allocation criteria, as these reflect international community policy. Moreover, each government that receives aid should be able to calculate its allocation using the formula (IDA 2007a). This means that the formula should remain simple, with easily accessible and internationally recognized indicators, and integrate the various allocation criteria in a consistent manner.

## 2.2 Steps in the Allocation Process

The allocation of ADF resources in accordance with a performance-based formula involves several stages (ADF 2008a). The first consists in calculating each country's share of resources using a performance-based formula. The share depends mainly on the country's population, the evaluation of the country's performance, and on the level of its per capita income. Performance evaluation is based on the Country Policy and Institutional Assessment Index (CPIA) which is computed once a year by AfDB country economists. The CPIA is made up of a number of indicators reflecting the quality of macroeconomic management, structural

policies, social policies and lastly, public sector and institutional management. The weight of the latter element is more than double that of the first three. Also taken into account to a marginal extent is the quality of the AfDB's project portfolio in each country. This performance-based allocation formula is in Annex A.

The second phase of the process involves dividing a country's allocation between loans and grants. Country eligibility to these forms of finance are dependent, much in the same way as at the World Bank, on its level of long term debt. Where there is a high risk of unsustainable debt, the country only receives grants rather than loans or a combination of the two. The classification used by the AfDB is the same as that used by the Bretton Woods Institutions. It is based on the definition of debt thresholds which in turn depend upon the quality of policy as measured by the CPIA. Net Present Value (NPV) of public/national debt as a percentage of GDP is used as one indicator and servicing of debt (as a percentage of exports or fiscal receipts) as the other. When the CPIA is less than 3.25, the limit for NPV debt as a share of GDP is 30 percent, whereas if the CPIA falls between 3.25 and 3.75, the limit is 40 percent. If the CPIA equals or is greater than 3.75, the limit increases to 50 percent (see Tables 1 and 2).

Table 1: **Country Classification according to level of Debt**

Risk of Unsustainability	Definition; Actual Level of Debt	ADF Conditions	Number of Beneficiary Countries
High (red)	Above 10% of the threshold	100% loan	18
Average (yellow) Low (green)	Between -10% and +10% of the threshold	50% loan 50% grant	9
	Below 10 percent of the threshold	100% grant	13

Table 2: **Debt thresholds in terms of the CPIA**

Debt indicators	Weak CPIA (above or equal to 3.5)	Average CPIA (between 3.5 et 3.75)	High CPIA (more than or equal to 3.75)
Debt Stocks in NPV/GDP (%)	30	40	50
Debt Stocks in NPV/ Exports (%)	100	150	200
Debt Servicing / Exports (%)	15	20	25

Grants are reduced by 20 percent. This percentage can be broken down into two elements. First, 10.12 percent corresponds to the additional cost to ADF of substituting a grant for a loan. Second, 9.88 percent is levied to incite the receiving countries to improve their policies and reduce their debt.

The third step concerns AfDB debt forgiveness under the multilateral debt relief Initiative (MDRI). Countries that undergo debt cancellations are only eligible to grants minus the level of their debt cancellation. These amounts are however reallocated to all ADF eligible countries using

the performance based formula (African Development Bank 2007).

Alongside performance-based allocations, 20 percent of ADF-11 resources have been earmarked to finance fragile states and regional operations. The additional financing granted under the new Fragile States Facility (FSF), reserved for a few countries, supports countries via a three-pillar framework:

- i. Supplementary funding for post-conflict and transitory countries,
- ii. Arrears clearance;

iii. Targeted support to increase institutional and administrative capacity.

Pillar 1 is fundamental in the FSF. The PBA is multiplied by a factor which depends on available resources<sup>(2)</sup>. Nine countries were identified for additional allocations in 2008: Burundi, the Central African Republic, Comoros, the Democratic Republic of Congo, Guinea Bissau, Liberia, Sierra Leone and Togo (African Development Fund 2008b). Côte d'Ivoire benefited from the second pillar in 2009. The third pillar is designed for technical assistance to countries where the situation is more difficult and is generally limited to UA 2 million per country. In addition, a regional allocation primarily finances trans-border infrastructure and regional public goods as necessary. The novel feature in ADF-11 was that one-third of the cost of regional operations was financed with the allocations of respective countries.

## 2.3 Economic Policy and Governance

The ADF resource allocation process gives a very large weight to the quality of economic policy and governance, mainly through the performance-based allocation (PBA) formula. For example if a country's performance rating (CPA) increases from 3 to 3.5, its allocation, as calculated in the

first step, increases by 67 percent *ceteris paribus*. The impact on the final allocation will be similar, although not identical since the two subsequent stages of computation also marginally reflect the country's performance.

In addition, the performance assessment gives governance (measured by category D of the CPIA) more than twice the weight of economic policy (measured by categories A, B and C of the CPIA). The CPIA score is also taken into account in subsequent steps of the allocation process. There is a 20-percent reduction in aid in grant form, but the decision to give aid in grant form alone is determined by the level of sustainable debt which is, itself, an increasing function of the CPIA. Furthermore, the reallocation of funds deriving from part of the grant discount and the Multilateral Debt Reduction Initiative (MDRI) is carried out in accordance with the performance-based formula (African Development Bank 2008a).

### 2.3.1 Uncertainty in Performance Measurement

The importance given to performance raises several issues (IDA 2007a). Performance measurement is based on subjective methods. To illustrate this, let

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(2)The top-up multiplier in 2008 was 1.97. The UA 5 million minimum allocation is excluded from the base for applying the multiplier.

us consider three alternative economic policy indicators: Kaufmann-Kraay-Mastruzzi (KKM) (Kaufmann et al. 2003), the World Bank Cost of Doing Business (World Bank 2008), and the Mo Ibrahim Foundation indicator (Annex B). None of these indicators is very strongly correlated with the CPIA (between 0.8 and 0.5)<sup>(3)</sup>. Moreover, the distribution of funds among countries would be very different if KKM or Doing Business were to replace CPIA in the PBA<sup>(4)</sup>. This result clearly raises the question as to how the indicator is constructed, with an emphasis on the analysis of formal regulations, in countries that do not share the same legal culture, as has indeed been noted by the World Bank Independent Evaluation Group.

### *2.3.2 Instability of the evaluation of good policy*

The uncertainty concerning the good policy indicator explains its instability. The context is that of a general increase in CPIA from 1999 to 2007 (averaging 18 percent for ADF countries). However the situations vary greatly. The index has

deteriorated for ten out of forty countries. The impact of the CPIA instability on allocations depends on how each country's CPIA varies in relation to the average of the rest. A first measurement of CPIA instability is the variation coefficient of each country's annual CPIA ratio to the CPIA average over the 1999-2007. For all ADF-eligible countries, this variation coefficient averages 10 percent, and exceeds that level for 11 countries<sup>(5)</sup>. CPIA instability is further evidenced in the succession of reverse variations: six countries have recorded four improvements and four decreases in eight years and most of the countries have had at least three improvements and three declines CPIA instability, together with the instability of the other elements of the allocation formula and the variation of available funds, is one of the factors that have significantly contributed to the instability of allocations.

### *2.3.3 Weak analytical basis*

Another reason to reduce the CPIA's weight in aid allocation is the weak analytical basis. Including the CPIA in the aid

(3) The high correlation between the AfDB and the World Bank CPIAs (0.97) should not be interpreted as an indication of the objectivity because of formal and informal consultations between the two institutions.

(4) In the first case, the variation in the final allocation depending on which indicator is used, exceeds 20 percent (in absolute value) in over half the cases. In the second case, the allocations are even more significantly different: English-speaking countries, with the exception of Liberia and Sierra Leone, stand to gain while all the French-speaking countries are heavy losers. The tables showing all the computations mentioned are available upon request from the authors.

(5) Angola, Central African Republic, Democratic Republic of Congo, Republic of Congo, Côte d'Ivoire, Equatorial Guinea, Eritrea, Liberia, Nigeria, Togo and Zimbabwe.

allocation process is based on the assumption that aid is only effective in well-governed countries. This theory was proposed by Burnside and Dollar (2000, 1997) and endorsed by the World Bank (World Bank 1998). The supposed link between the quality of policy and the effectiveness of aid in terms of growth forms the basis of the model for optimal allocation of world aid presented by Collier and Dollar (2002, 2001). However, this theory has been fiercely criticized from both the analytical and econometric standpoints. It premises that aid effectiveness is measured solely in terms of growth and that aid cannot improve policy. This last assumption is highly debatable (Devarajan, Dollar and Holmgren 2001). Moreover, the econometric results do not appear to be robust (Hansen and Tarp 2001, Dalgaard and Hansen 2001, Lensink and White 2001, Easterly 2003 and Roodman, 2007). Some studies have shown small positive significant effects on growth from aid where there have been good fiscal, monetary and trade policies (Charavati 2005). However these effects varied and depended on the characteristics of the country and region.

The weak link between policy quality and aid effectiveness has altered donor motivation. The performance criterion applied for allocation has become a reward for virtuous governments, especially those fighting corruption, and an incentive for

others to adopt good practices. However, allocating aid in line with sound economic policy runs into the same criticism as the conditionality generally attached to budget support (Collier et al. 1997). Dictating to governments which policy should be followed prevents them from taking ownership of the policy and so limits effectiveness. A further problem with such an approach is that it implicitly assumes homogeneity in countries and so applies the same policies.

## **2.4 Fragile States and Small Countries**

### *2.4.1 Treatment of Fragile States*

The strict application of the PBA formula, which attaches little importance to the needs of countries (through the per capita income for which the exponent is  $-0,125$ ), quickly became untenable. Many countries, particularly those emerging from war or internal conflicts are facing serious political problems that translate into a low CPIA and at the same time highly need assistance. Moreover, aid to these countries logically may be particularly effective since they have experienced a substantial contraction of their income, and have a potential for short-term expansion, and also because aid could help prevent the resurgence of conflicts (Collier and Hoeffler 2004, African Development Fund 2008c, Guillaumont 2007b). This is the justification for the Fragile States Facility

which has replaced the multiplier applied for allocations to post-conflict countries, so as to assist distressed countries and aid orphans.

However this practice has a paradoxical result: ADF per capita aid decreases in line with performance and then suddenly increases, reaching a particularly high level around the CPA mid-point. As a result, the relationship between allocations and the performance evaluation is not monotone increasing, as clearly illustrated by Annex D on 2008 allocations, which presents the countries by quintile according to their CPA.

Even if the Fragile States Facility was established to take into account the fact that the performance weighting penalizes countries which need aid the most, the volume of aid thus awarded depends on the amount of ADF-10 allocations, which is largely performance-based. Also, beneficiaries of the facility are required to have demonstrated their desire to improve their policy and aid may be suspended if that desire is not evident.

#### *2.4.2 Thresholds and ceilings*

2.4.4 Another problem is how to deal with small countries. Small sizes are recognized as a handicap, especially for landlocked countries. They offer limited economies of scale in the civil service, produc-

tion is necessarily concentrated in a few sectors, and the domestic market is narrow (IDA 2007b). To avoid having the available funds overly focused on a few large countries, a minimum country allocation has been introduced (base allocation of UA 5 million) as well as a maximum (10 percent of total resources for each country and 5 percent for the entire blend group). This is a source of discontinuity in allocations leading to anomalies. For example, Ethiopia, which at the end of the first stage, prior to the application of the ceiling, was to receive 45 percent more than Tanzania, finally received 3.4 percent less.

The transparency requirement set out in Section 2.1 calls into question the practice of floors and ceilings which are intended to take a country's small size into account as a handicap, but in doing so, it complicates the application of the formula. This discontinuity of treatment is aggravated in the allocation of supplementary funds to fragile states with a floor of UA 10 million and a ceiling of UA 60 million.

### **3. Proposed Adjustments of the Allocation Formula**

We present two adjustments to the allocation formula ensuing from the previous discussion. Firstly, we propose to take into account the structural handicaps encountered by certain countries in their

efforts to exit poverty. The United Nations uses these handicaps – economic vulnerability and the low level of human assets – to identify the group of least developed countries (LDCs) to which developed countries have pledged a volume of aid equivalent to 0.15 percent of their GDP. Including these criteria in the formula would reduce the instability of allocations, since structural handicaps are by definition relatively stable. Most importantly, this would make it possible to treat the problem of fragility of certain countries in an integrated framework. We chose not to propose a definition of performance that would include outcomes instead of the implementation of policies. In this case, progress in education and health could be potential indicators (Kanbur, 2005). However, outcome indicators change very slowly and are not only a result of the choice of policies, but also of external factors (Adam et al. 2004).

### **3.1 Economic Vulnerability**

#### *3.1.1 Justification*

Introducing economic vulnerability is justified both from an effectiveness and equity points of view. Contrary to the Burnside and Dollar theory, it has been shown that aid effectiveness in terms of growth does

not only, and perhaps not mainly, depends on economic policy (Guillaumont 2007a). There are other factors at work that can be grouped under the heading of economic vulnerability. These factors include, for example, shocks to which certain developing countries are particularly exposed, either through international trade – owing to the variations in world commodity prices – or as a result of climatic hazards or natural disasters. Such events, while adversely affecting growth, raise aid effectiveness (Guillaumont and Chauvet 2001, Chauvet and Guillaumont 2004). In other words, aid is marginally more effective in countries that are more vulnerable or dampens the negative impact of vulnerability<sup>(6)</sup>.

In countries exposed to shocks, aid can prevent a standstill in imports and growth as well as the downward spiral that often ensues. The higher the volume of aid is, the greater the relative extent to which it dampens the macroeconomic impact of shocks will be. Economic vulnerability is a factor of aid effectiveness, mainly due to the latter's stabilizing effect. An increase in aid when a country suffers from a negative terms of trade shock is evidently favorable (Collier and Dehn 2001). Though aid is not systematically counter-cyclical, it remains a stabilizer, provided it

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(6) Studies testing this hypothesis have shown more robust results than those against the conventional theory of aid effectiveness within a good governance economy (Roodman 2007).

is less variable than exports, as it is the case in countries suffering major exogenous shocks (Guillaumont 2006, Chauvet and Guillaumont 2009). This is in fact a reason for reducing the instability of allocations. It is often considered that aid has a negative effect on growth because of limited absorptive capacity (Easterly 2003). Studies show that success rates of projects financed by the World Bank decrease as the total level of world aid increases. However, in vulnerable countries this decline has been reduced (Guillaumont and Laajal 2006).

Taking economic vulnerability into account in the allocation formula is not only justified because it reinforces aid effectiveness; it is also consistent with a principle of justice. As stated in section 2.1, aid equity could mean compensating for countries' structural handicaps in order to give them equal opportunities for development. Structural economic vulnerability is pertinent, to the extent that it is the result of geography, history or the international environment. It is a factor that renders economic policy or national efforts more difficult.

### 3.1.2 *Measuring economic vulnerability: the United Nations Index*

It is suggested that the Bank, rather than designing its own vulnerability index, uses the index defined by the United Nations Development Policy Committee and regu-

larly calculated to identify Least Developed Countries (United Nations 2008, Guillaumont 2009a, 2009b). For cost-effectiveness and acceptance in the broad aid community, it seems advisable to use an indicator which is internationally accepted. The Economic Vulnerability Index (EVI) is a weighted arithmetic averaging of a series of indicators. These indicators are given below with the related weights in brackets.

- Size of shocks (0.5):
  - External: instability of goods and service exports (0.25)
  - Natural (0.25) :
    - instability of agricultural production (0.125)
    - percentage of population displaced as a result of natural disasters (0.125)
- Degree of exposure to shocks (0.5)
  - Small population (0.25)
  - Remoteness from markets adjusted for landlocked situation (0.125)
  - Share of agriculture, forestry and fisheries in overall value added (0.0625)
  - concentration of goods exports (0.0625)

Even if the composition of the EVI is relatively sophisticated, its significance is clear.

Introducing the EVI into the allocation formula takes small countries into account marginally, since size is directly included in the definition of vulnerability and increases the export concentration. As economic instability resulting from external shocks is often the source of social unrest, crises and civil war, introducing a vulnerability indicator implies preventive and not just curative treatment of fragile states. The application of economic vulnerability as an allocation criterion is consistent with facilities that aim at ex-post cushioning of shocks, such as FLEX and the European Development Fund Envelope B.

### 3.1.3 Simulations of allocations with EVI

To illustrate the impact of the vulnerability indicator on allocations, we expand the ADF-11 PBA formula by adding EVI to the performance indicator giving it first a low weight (one-third of that of performance), and then an equal weight. These weights are meant to be indicative. For ease of comparison, the outcome of simulations are presented at the same time as the current allocations, with and without the

fragile states allocations (columns 1 and 2; fragile states are indicated by an asterisk in Annex C).

Comparing simulation 2 which gives the same weight to performance (CPA) and vulnerability (EVI), fragile states would, generally, all receive an allocation similar to their current one. Only the Democratic Republic of Congo (DRC) would receive more, given the ceiling of UA 60 million which is currently applicable to the Fragile States supplement and the Comoros would receive less owing to the floor UA 10 million<sup>(7)</sup> Guinea Bissau, which also benefits from the floor but to a lesser extent, would have almost the same allocation as now. One exception however is Côte d'Ivoire which would receive less than now: it benefits from the fact that the top-up is a multiple of the ADF-10 allocation and that she benefits from pillar 2 of the Fragile States Facility for arrears clearance. If the weight of the EVI is reduced to a third of that of performance (simulation 1), it is not possible to provide Fragile States with the current level of allocations.

Introducing the EVI does not only favor countries that are currently eligible for the new Fragile States Facility. More generally, it favors countries that suffer from shocks and are, or risk, experiencing social or political unrest (simulation 2,

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(7) If there was no floor, Comoros would have received a top-up of near UA 1 million

column 4)<sup>(8)</sup>. This aid increase will obviously be to the detriment of countries which are currently favored owing to their good CPIA ratings: Kenya (provisionally), Ghana, Tanzania, Senegal, Cameroon, and to a lesser extent, Mali. The loss entailed for these countries is obviously reduced if the EVI weight is reduced (Simulation 1).

In short, this new formula would enhance the stabilizing effect of aid by preventing excessive reductions in ADF aid to countries that run into difficulty owing to external shocks with the attendant deterioration of their policy rating. It seeks to provide preventive (and not just curative) assistance to potentially fragile states.

### **3.2 Human Capital**

#### *3.2.1 Justification*

A low level of human capital can lessen the impact of a given volume of aid on economic growth, at least in the short term, since it entails weak administrative capacity. This feature should thus be seen as an allocation criterion more in the interest of equity than for immediate effectiveness. However, by making it possible to strengthen the human capital, aid can, in

the long term, contribute to freeing countries from the poverty trap, since the lack of skilled workers causes low productivity (Sachs et al 2004). Though the per capita income level is already included in the formula – it shows the distance to be covered to attain levels attained by developed countries – it does not reliably reflect the poverty level. That is, of course, why the Millennium Development Goals refer directly to human capital measurements, especially in the education and health sectors.

#### *3.2.2 Measurement*

We can once again refer to an indicator used by the United Nations in identifying Least Developed Countries (LDCs); the Human Asset Index (HAI). This is made up of four elements, each with the same weight: two indicators relating to health (the child mortality rate and the percentage of the population suffering from malnutrition) and two indicators for education (the adult literacy rate and the secondary school enrolment rate) (United Nations 2008, Guillaumont 2009b) HAI is preferred to the better known Human Development Index because its content is more comprehensive, including a nutrition factor, and uses more reliable data (for

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(8) Namely Angola, Chad, Republic of Congo, Eritrea, Malawi, Mozambique, Niger, Rwanda, Somalia, and particularly Sudan.

example child mortality rate, in place of life expectancy). Moreover, the Human Development Index components include per capita income, which is already included in the allocation formula.

### 3.2.3 Simulations

We have expanded previous simulations by incorporating the EVI and HAI allocation formulas simultaneously (Amendment 3, Annex A). The results are reported in simulation 3 in Annex C. As the most vulnerable countries often have often a low level of human capital, these results in which the governance weighting is scaled down to 0.33 instead of 0.5 generally increase allocations to Fragile States, except for Togo.

## 3.3 Population Weight

### 3.3.1 Justification

The EVI takes small population size into account; but with a weighting of only 25 percent. As a result, the inclusion of the EVI in the formula does not make it possible to maintain Ethiopia's allocation below the 10 percent threshold of available ADF resources. However, this result is just barely achieved where the population factor is raised to exponent 0.8 rather than 1 as in the second simulation (simu-

lation 2bis); the allocation is slightly above 10 percent for the other simulations (between 11 and 12 percent).

### 3.3.2 Simulations

These new simulations show that small countries are significantly favored, to the detriment of the more highly populated ones. Comparing simulations 2 and 2bis, it may be seen that the disadvantaged countries are those with populations of over 24 million, and especially when their populations are increasing. The sacrifices imposed on highly populated countries are more evenly distributed. Ethiopia would receive UA 431 million and Tanzania UA 267 million, keeping the order of the allocations deriving from the formula calculation which, as we have seen, is not the case for the current distribution, owing to the ceiling. Regarding the least populated countries, Sao-Tomé and Principe (160,000 inhabitants) receives UA a supplement of 2 million, Cape Verde (530,000 inhabitants), UA 9 million, and Djibouti (830,000 inhabitants), UA 5 million. Aside from Sao-Tome, whose allocation goes from 5 to 7 million it may be noted that, using a population exponent of less than 1 (for instance 0.8), it would be possible to do without the basic allocation (UA 5 million)<sup>(9)</sup>, According to the results of simulation 3bis, Ethiopia continues to

(9) The new simulations (coded bis in the table) take into account the basic allocation of UA 5 million.

exceed the ceiling while Sao-Tome and Principe obtains only 5 million; but it will of course, be possible to choose a lower exponent to give smaller countries a little more of an advantage.

#### **4. ADF Support to Regional Integration**

Most multilateral development finance institutions are concerned about promoting regional integration among developing countries. For the AfDB, this concern is particularly marked, given the small demographic and economic size of most African countries. It is a source of satisfaction that the proportion of resources allocated to regional operations is higher than in other institutions<sup>(10)</sup> and has been rising.

An ADF-11 innovation is that one-third of the cost of regional operations will be deducted from allocations to the countries concerned (except for regional goods). The regional allocation financing two-thirds of the regional project is thus intended as an incentive to encourage countries to finance integrating projects. The deduction from the national allocation is capped at 10 percent, when that allocation is below UA 20 million. This provision affects nine of the forty countries.

This is the source of a certain discontinuity in the incentives to encourage involvement in regional operations. Take the case of a country whose allocation increases from UA 19 to 21 million (about the size of Guinea's allocation) and which wishes to participate in a regional integration project for an imputed value for it of UA 36 million. If its allocation had remained at UA 19 million, it would have to contribute UA 1.9 million from its country allocation to the regional project and it would have UA 17.1 million left to finance its national projects. However, with its allocation up to UA 21 million, it will finance from its allocation a third of UA 36 million, that is, UA 12 million, and have only UA 9 million left instead of UA 17.1 million.

Moreover, imputing to each country a specific share of the financing of a regional project (which will determine the amount of its national contribution) is not function of the expected economic benefit (indeed often difficult to assess), but rather of the share of the cost of the project actually implemented in its territory. For a road project, that share will depend on the distance over its territory. In reality, a coastal country – which has less interest in a road than a landlocked country that would be opened up by such a project – could be

<sup>(10)</sup> This proportion is 4.6 percent for IDA and 7.2 percent for IDA allocations to African countries compared to 15 percent for ADF 10 (IDA 2007c)

forced to make the larger contribution to the construction. A concrete example is the road linking Mombasa (Kenya) and Kampala (Uganda). In sum, the impact of the regional reserve on ADF country aid allocation is difficult to measure.

Two questions emerge:

- i. To what extent should countries contribute to regional projects out of their country allocations? The current allocation system treats this aspect explicitly, rightly favoring small countries that have greater need for regional integration, but bringing about discontinuity in the treatment of countries according to their size. We propose that the share of regional projects financed out of national allocations decrease in line with the countries' need for regional integration, so as to avoid anomalies with regard to the amounts of national contributions.
- ii. How should the allocation which is earmarked for regional operations be distributed among the countries? Currently there is a practical approach to allocating funds in light of regional investment opportunities. We suggest that a supplementary potential country allocation be introduced for the sole purpose of financing regional opera-

tions, and awarded in accordance with each country's relative need for regional integration. This provision should be a strong incentive for mounting integration projects<sup>(11)</sup>.

## 5. Conclusion

A critical examination of the geographical distribution of ADF funds reveals the excessive weight given to sound economic policy and good governance and the lack of transparency and consistency of the allocation formula. Good governance is a subjective notion that varies over time. It contributes to the instability of allocations which, though calculated for a three-year period, are readjusted every year. The analytic basis of this weighting of good governance is debatable since it is not the only, not even the main, factor determining aid effectiveness. Moreover, since the importance attached to good governance led to little aid being given to countries emerging from war or crisis, while they are particularly in need of assistance, this key allocation principle has been undermined by the Fragile States Facility. As a result countries with Country Performance Assessments around the mid-point of possible scores receive abnormally high amounts of aid. Lastly, the introduction of thresholds and ceilings at the different stages of calcula-

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(11) See the more detailed report available from the AfDB Development Research Department

tion of allocations complicates the application of the formula and has brought about discontinuity and unfortunate threshold effects.

The proposed amendments of the existing allocation formula are justified in light of the three guiding principles: aid *effectiveness*, *equitable* aid distribution, and *transparency* of the formula. The first proposal, the most desirable in our view, would be to include an economic vulnerability criterion in the formula; a second would be to simultaneously introduce a human capital criterion; and a third, to reduce the weighting of the population element. Our numerical simulations show that this amendment would make it possible to forego the Fragile States Facility as well as the country allocation ceilings, and thus avoid the resulting inconsistencies.

The mechanism would continue to be supplemented with a specific regional integration allocation. In that regard this report proposes two amendments. Firstly, the share of regional projects financed from the national allocation could be decreased in accordance with a country's need for regional integration, therefore avoiding anomalies in the countries' required contributions. The second amendment seeks to set a country potential allocation supplement specifically for financing regional operations, again depending on the relative need for regional integration,

which itself increases with a country's exposure to external shocks. This amendment would thus provide an added incentive for promoting regional projects.

Seeking to reduce the weight of sound economic policy and governance in the performance-based allocation formula does not mean that the quality of economic policy is of no significance for development aid policy. The idea is that policy quality should determine aid modalities rather than be a criterion for selection of countries to be assisted, so as to avoid doubly penalizing inhabitants of the worst governed countries, which are also very largely to be found in the Fragile States category. The key issue is then not so much whom to assist in order to be effective, but rather how to assist. In that regard, the quality of governance and economic policy could determine both aid beneficiaries (central government or other actors) and conditions attached to aid.

Thus, poor governance could result in distributing aid through the local communities, civil society organizations – where these exist – or enterprises; it should also lead to a preference for project aid over budget support and greater weight to technical assistance. Good governance should allow for budgetary aid modalities that are more respectful of the sovereignty of countries desiring to own, and which can own, their economic policies.

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## ANNEXES

### Annex A: Amendments to the Allocation Formula

#### A.1.1 Base Allocation

The Performance- Based Allocation (PBA) formula is as follows:

$$PBA = CPA^4 * (GNI / P)^{-0.125} * P, (1)$$

with CPA as the Country Performance Assessment, GNI is Gross National Income, and P for population. GNI is expressed in United States Dollars and is the average for the 3 years preceding the year of calculation of the allocations. The population data is provided by the United Nations and covers the year preceding the year of calculation of the allocations.

The CPA is itself the weighted sum of three indicators:

$$CPA = 0.26CPIA_{AtoC} + 0.58CPIA_D + 0.16CPPR(2)$$

with  $CPIA_{AtoC}$  as the sum of structural and social macroeconomic policy indicators, the  $CPIA_D$  indicator of public sector and institution management, CPPR (Country Portfolio Performance Rating) the proportion of the country's projects that were classified at evaluation as problem projects converted on a scale of 1.5 to 5. A

base allocation of UA 5 million is distributed to all ADF-eligible countries and the allocation is capped at 10 percent of the total allocation at each stage of calculation.

The first stage in calculating allocations using the formula is followed by a second stage that takes into account the grant/loan distribution and relatively reduces the grant allocation. A third stage deducts from the allocation, the AfDB debt cancellations under the Multilateral Debt Relief Initiative.

#### A.1.2. Benchmark Allocation

The sum of the base allocation deriving from the previously defined 3 stages of calculation and fragile states top-up is used for purposes of comparison. This is the allocation which considered appropriate, since the aim of introducing the EVI is to integrate all the countries. Those receiving the top-up are: Burundi, Central African Republic, Comoros, Côte d'Ivoire, the Democratic Republic of Congo, Guinea Bissau, Liberia, Sierra Leone and Togo. In addition, Côte d'Ivoire benefits from the second pillar for arrears clearance (103 million). As the beneficiaries of the left-over 51 million from the 408 million set aside for fragile states were unknown, that amount could not be allocated across countries.

### A.1.3 Amendments to the formula

Three amendments are considered:

Amendment 1

$$A = (0,75CPA + 0,25EVI)^4 * (GNI / P)^{-0,125} * P$$

Amendment 2

$$A = (0,5CPA + 0,5EVI)^4 * (GNI / P)^{-0,125} * P$$

Amendment 3

$$A = [0,33CPA + 0,33EVI + 0,33HAI]^4 * (GNI / P)^{-0,125} * P$$

The simulations have been carried out by adding the total Fragile States provision to the total funds allocated in accordance with the PBA.

As EVI is calculated on a scale of 0 to 100, it has been brought to the same scale as the CPA by dividing by 20 and adding one unit. The human asset provision has been reversed, i.e.,  $100 - HAI$ , and then put on a scale of 1 to 6. This transformation enables the allocation to be highest where the human capital level is lowest. In addition, a base allocation of UA 5 million continues to be provided to all member countries, though no ceiling is applied in this case. The 3 simulations are also repeated giving a population exponent of 0.8.

### Annex B: Alternative Governance Measures

The Kaufmann-Kraay-Mastruzzi (KKM) index has six dimensions: “voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law and control of corruption”. While taking into account several CPIA elements through the measuring of government effectiveness and regulatory quality measures, this index gives greater weight to the quality of political governance (accountability, stability, rule of law and control of corruption).

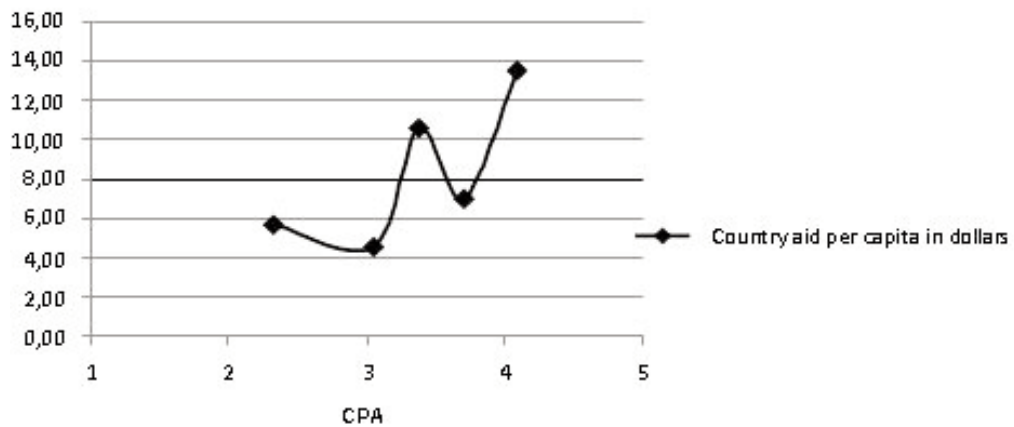
Doing Business provides a quantitative measurement of legal and regulatory conditions (entailing time frames and costs) whereby a local small or medium-sized firm can conduct its business, in other words, start up its activity, obtain a building permit, employ workers, register its ownership rights, obtain credit and protect its investment, pay taxes, import or export goods, secure its contracts and conclude its activity.

The Mo Ibrahim index comprises five criteria: “Safety and security, the rule of law, transparency and corruption, Participation and human rights, sustainable economic opportunity, human development”.

## Annex C: Simulations

			Population to the power of &			Population to the power of 0,8		
	reference Allocation	Augmented Allocation	Simulation 1	Simulation 2	Simulation 3	Simulation 1 bis	Simulation e BIS	Simulation 3 bis
Angola	57	57	71	83	102	75	86	107
Benin	92	92	97	96	68	118	115	83
Burkina Faso	128	128	133	130	136	145	140	148
Burundi*	31	77	49	74	88	59	88	106
Cameroon	129	129	116	97	83	121	100	87
Cape Verde	12	12	12	12	7	21	21	10
Central African Rep.*	16	28	21	27	31	28	36	42
Comoros*	4	14	5	7	7	6	11	11
Congo, Dem. Rep.	164	224	218	274	419	178	220	342
Congo, Rep.	15	15	19	23	17	25	31	23
Côte d'Ivoire*	52	201	55	55	62	57	56	64
Djibouti	7	7	8	10	8	12	15	12
Eritrea	14	14	23	39	38	30	51	50
Ethiopia	394	394	609	570	668	468	431	513
Gambia	8	8	11	14	11	18	23	19
Ghana	309	309	279	232	133	277	227	131
Guinea	21	21	22	21	27	29	27	35
Guinea Bissau*	8	18	12	19	19	19	29	30
Kenya	354	354	271	186	156	246	166	141
Lesotho	16	16	18	20	13	27	29	18
Liberia*	20	33	31	47	42	43	65	59
Madagascar	159	159	161	154	131	166	156	135
Malawi	120	120	132	138	110	145	149	121
Mali	139	139	131	114	126	149	128	144
Mauritania	19	19	20	19	15	29	28	22
Mozambique	129	129	143	150	178	145	149	179
Niger	110	110	125	135	171	138	146	188
Nigeria	198	198	217	214	211	216	211	206
Rwanda	100	100	117	130	99	139	151	117
Sao Tome & Principe	4	4	4	5	4	6	7	5
Sénégal	144	144	130	108	85	149	122	97
Sierra Leone*	29	72	45	65	75	59	84	97
Somalia	4	4	10	32	71	11	38	85
Soudan	39	39	72	124	116	65	110	104
Tanzania	408	408	393	305	307	350	267	272
Tchad	30	30	52	83	90	61	95	105
Togo*	24	39	30	36	32	38	45	40
Uganda	362	362	367	350	228	345	324	214
Zambia	89	89	96	99	90	110	111	103
Zimbabwe	6	6	8	11	13	9	14	18
<b>Total</b>	<b>3,965</b>	<b>4,322</b>	<b>4336</b>	<b>4,308</b>	<b>4286</b>	<b>4,331</b>	<b>4,302</b>	<b>4,282</b>

Note :The current allocations could be slightly different from those for 2008, owing to the redistribution of funds that some countries lost as a result of the application of ceilings, the granting of loans and the cancellation of debts. An asterisk (\*) indicates countries receiving the top-up.

**Annex D: 2008 ADF Allocations per Capita according to CPA Level per Quintile****Chart 1. CPA-Based Per Capita Country Aid by Quintile**

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