



FONDATION POUR LES ÉTUDES ET RECHERCHES
SUR LE DÉVELOPPEMENT INTERNATIONAL

RETHINKING INTERNATIONAL CO-OPERATION:

***PUTTING VULNERABILITY MEASURES AT
THE HEART OF SUSTAINABLE DEVELOPMENT***

OECD Development Centre “DEV TALKS”

OECD Headquarters, Paris

June 27th 2019

Introduction: Vulnerability as the Opposite to Sustainability

- Vulnerability is naturally at the heart of sustainable development
- Not only vulnerability is the semantic opposite of sustainability
- But also during the preparation of the SDGs, where a main innovation was their universality, the situations of fragility were presented as a major exception....
- And most international official documents often refer to these « situations of fragility » and to the case of « fragile states », designated by this word or another one
- At the same time, the criteria for designing fragility and vulnerability have evolved and the need for a comprehensive vulnerability metrics has increased,
- Making clear that measuring continuously vulnerability might be more important than defining a category of most vulnerable states.

Introduction II : an increasing concern on vulnerability in development policies

- Vulnerability as an identification criterion (one out of 3) for LDCs (with EVI, in 2000-2005), with a debated application to the graduation of LDCs
- Similar debate at OECD for the graduation of UMCs (from the list of ODA eligible)...for the “most vulnerable” ones
- Important UNGA resolution (on smooth transition) inviting development partners to consider LDCs identification criteria (including vulnerability) as criteria for aid allocation
- Implementation by the EU for the allocation of the last EDF and DCI
- Pressure of T7 for a reference to this issue at the next G7
- An issue presently debated for the replenishment of concessional windows of MDBs

Introduction III: Illustration through ADF

- ADB, through its ADF wishes to be considered as a leader in tackling vulnerability, indeed quite high in Africa, due to the severity of situations of economic, climatic, and socio-political vulnerability.
- . So with a mandate of the Governors, ADB launched a study to see how vulnerability can be better addressed in the process of allocation for the next ADF
- This study conducted in two phases by Ferdi illustrates what is at stake when looking for “putting vulnerability measures at the heart of sustainable development”
- What was missing to implement a consistent reform of the allocation process was a conceptual framework, taking into account the structural vulnerability of African countries in its main dimensions and through relevant quantitative indicators.
- The qualitative approach of fragility and vulnerability is indeed needed for targeting operations, but for allocation a consistent quantitative approach is needed
- This presentation consists of four parts: (i) Why change? (ii) What conceptual framework should be sought? (iii) What indicators should be used? And (iv) What are the findings of simulations?

The performance/fragility dilemma of MDBs

- Donors agree that multilateral development banks should allocate their concessional funds according to the country performances
- At the same time they more and more express a concern about the state fragility of many countries, in particular in Africa, and recognize the need of a special support to these countries.
- The issue is that fragile states are by definition poor performers while good performance strongly drives aid allocation.
- Attempt to address this issue by using a category of fragile states (now « transition states » at the ADB or « turn around countries » at the WB), with a special envelope devoted to them, the Transition Support Facility (TSF) at the ADB and multiple distinct facilities at the WB tackling different aspects of fragility (Refugees, Conflict prevention, etc.).

Drawbacks of using a category of fragile countries

- Difficulty to translate a loose concept of fragility in a clear category.
- Well illustrated by the last design of the ADF “transition economies”:
 - from the “harmonized list” of FS, relying mainly on a low level of CPIA (the opposite of what is considered as performance)
 - and/or several other criteria, either quantitative or qualitative (commitment to consolidate peace and security, contraction of GNI per capita, low level of human capital, improvement of macro policy).
- ADF category only captures some of the *various aspects of fragility*.
- It ignores the *degrees of fragility* between countries both within and out of the category.
- It reflects a *curative and not a preventive* approach of fragility.
- It corresponds to a view of fragility as a transitory feature and an exception to the rule.
- Those features are also present at the WB.

Three principles: Transparency , Equity, Effectiveness

- The use of continuous indicators of structural fragility would lead to a *more transparent* system as well as a clearer impact of performance.
 - In addition, it would lead to *more equitable* allocation, differentiating between countries according to their degree of fragility and contributing to creating greater equality of opportunities among them.
 - Finally, it would lead to *more effective* allocation, for two reasons: (i) the marginal effectiveness of aid is stronger in the most vulnerable countries; (ii) a better performance incentive when structural handicaps are taken into account.
- The implementation of these principles *implies distinguishing between two sources of fragility*, the one resulting from exogenous factors, and the one reflecting the country's present policies. The fundamental issue is therefore to *simultaneously address fragility as a need and fragility as a sign of poor performance*.

The ADF: From a seemingly simple rule...

- A simple PBA formula:

- $Ai = f(\text{performance, income pc, population, infrastructure})$

$$Ai = (CPA)i^{4,125} \times \left(\frac{GNI}{P}\right)i^{-0,125} \times (POP)i^1 \times (AIDI)i^{-0,25}$$

$$CPA = \begin{cases} 0.20 \times CPIA_{ABC} + 0.58 \times CPIA_D + 0.06 \times CPIA_E + 0.16 \times PPA \\ 0.36 \times CPIA_{ABC} + 0.58 \times CPIA_D + 0.06 \times CPIA_E \text{ without portofolio} \end{cases}$$

- **With a simple adjustment for countries identified as fragile** : TSF (pillar I) allocation is a multiple of the average of the highest two annual basic PBA allocations of the previous cycle. TSF also includes Pillar II (arrears clearance) and Pillar III (capacity building and technical assistance) allocated separately.
- With an important envelope for regional operations (21 % of ADF-13 resources) and a small special envelope for private sector support.

The ADF: ...to a complex system lacking transparency...

- many exceptions and additions to the PBA...
 - Individual country allocations cannot exceed 10% of PBA envelope.
 - A discount of 20% on grants (only 5% being reallocated through the PBA)
 - The netting out under the MDRI initiative (reallocated through the PBA)
 - Discounts for Gap and Blend countries.
 - A minimum allocation of UA 15 million per cycle is made to all countries, with the exception of countries in transition to blend or ADB-only status.
- ...and to the implementation of TSF (pillar I) rules
 - Eligibility to the category (two steps, implying various indicators and discretionary thresholds).
 - Multiplicative factor being either supposed to be 2 but 1.5 when membership has been lasting for more than 3 cycles.
 - 3 different and cumulative discounts depending on the level of the CPIA (10%), the level of GNI per capita (20% or 30%), and the engagement year (30%).
 - The final Pillar I allocation for TSF eligible countries must range between 10 and 60UC millions.
- The result is the dilution of the PBA and the TSF (pillar I) in a complex system lacking transparency.

The ADF: ...undermining the PBA principle, that could be enhanced by a better treatment of fragility

- As a result, once taken into account minimum allocation, TSF and regional operations, *the number of countries for which their PBA determines at least 50% of their allocation is low (less than a half of ADF eligible countries: 17/40 in 2014)*

Options for a new conceptual framework

Several options:

- Only reforming the TSF by taking into account the vulnerability level of the various countries eligible for this facility in a specific formula: does not address the neglect of vulnerability in the general (PBA) formula
- Merging the TSF into a general allocation formula taking into account vulnerability in all ADF-eligible countries: suppresses a window devoted to specific operations against vulnerability
- A preferred option, combining the
 - a PBA revised to take into account structural vulnerabilities faced at various levels by most of ADF eligible countries
 - with a TSF updated to take into account as well various forms of vulnerabilities characterizing transition states.

The new conceptual framework

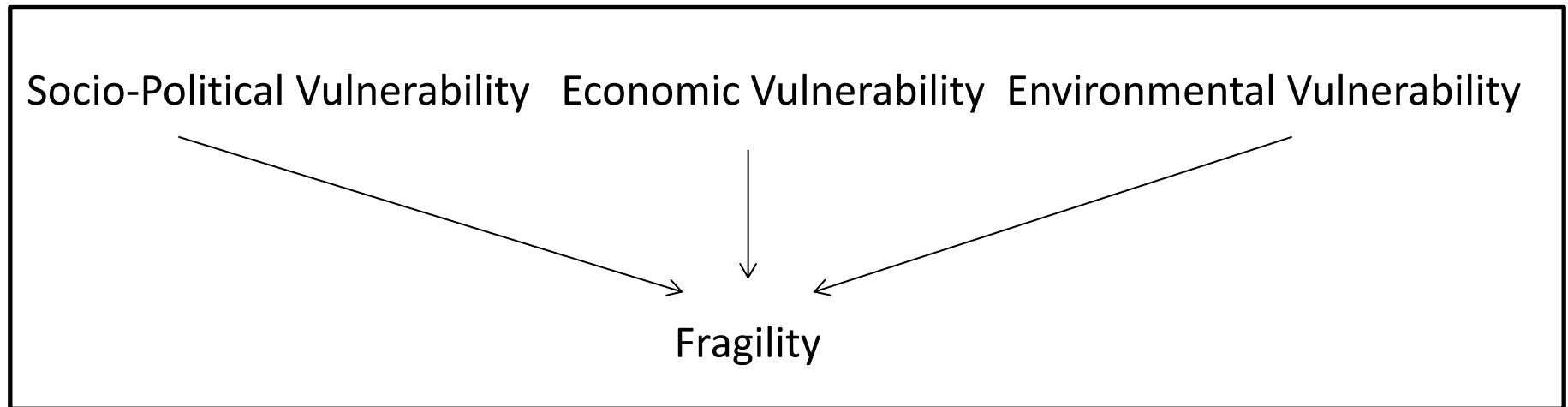
- The proposed reform combines a general allocation based on both performance and vulnerability (*Performance and Vulnerability Based Allocation* – PVBA) along with a new specific allocation formula for the more fragile countries or countries in transition corresponding to the TSF.
- The simple structure proposed for the PBA, now called PVBA, follows the formula currently used for the PBA:

$$\text{Allocation} = f(\text{Population}, \text{Needs}, \textbf{Fragility}, \text{Performance})$$

- The main challenge of this PVBA is *to design fragility from the various kinds of structural vulnerability*. The method relies on the use and aggregation of several specific indicators of vulnerability, each with its own logic and explicit weight in the allocation formula.

From structural vulnerabilities to fragility

- Our approach to structural fragility aims at taking into account its three main components, consistently with the current consensus on the drivers of fragility:



- *It allows needs, performance and structural fragility to coexist as positive allocation factors in a consistent framework.*

Building on the current PBA framework

- The PVBA introduces *two other changes* compared to the current PBA:
 - (i) it removes the indicator of poor *infrastructure*, which is now incorporated into the structural economic vulnerability index;
 - (ii) it introduces an indicator of *human needs* alongside the criterion of per capita GDP to reflect the needs of countries more specifically than the exclusive use of per capita GDP; and
- We also discuss introducing in the definition of *performance* an element adapted to the *specific context of fragility (security, justice, etc.)*.
- Other minor technical improvements are proposed to make the allocation process more transparent.

Key properties

- The indicator(s) of fragility should reflect three main kinds of vulnerability (*economic, socio-political, environmental*), logically combined due to their relationships, and supplemented by an indicator on human needs.
- They should also be designed *as exogenous as possible* (i.e. independent of present policy), since in the formulas these fragilities are positive factors of allocation.
- Vulnerability to shocks indicators should primarily reflect both the likely size of the shocks and the exposure to these shocks.

Defining vulnerability

- Vulnerability, at the *macro* level (as at the *micro* level) is the risk to be hampered by exogenous shocks, either natural or external (...)
- It depends on three main components:
 - likely *size of the shocks*, recurrent or progressive (...)
 - the *exposure* to these shocks
 - the capacity to cope with them or capacity to adapt or *resilience*
- *Structural vulnerability* is the vulnerability that does not depend on the country present will, and is determined only by exogenous and lasting factors (of the three components)
- *General vulnerability* also depends on the country present and future will, that is more rapidly changing, in particular through the resilience component
- Distinctions valid for various kinds of shocks and vulnerability

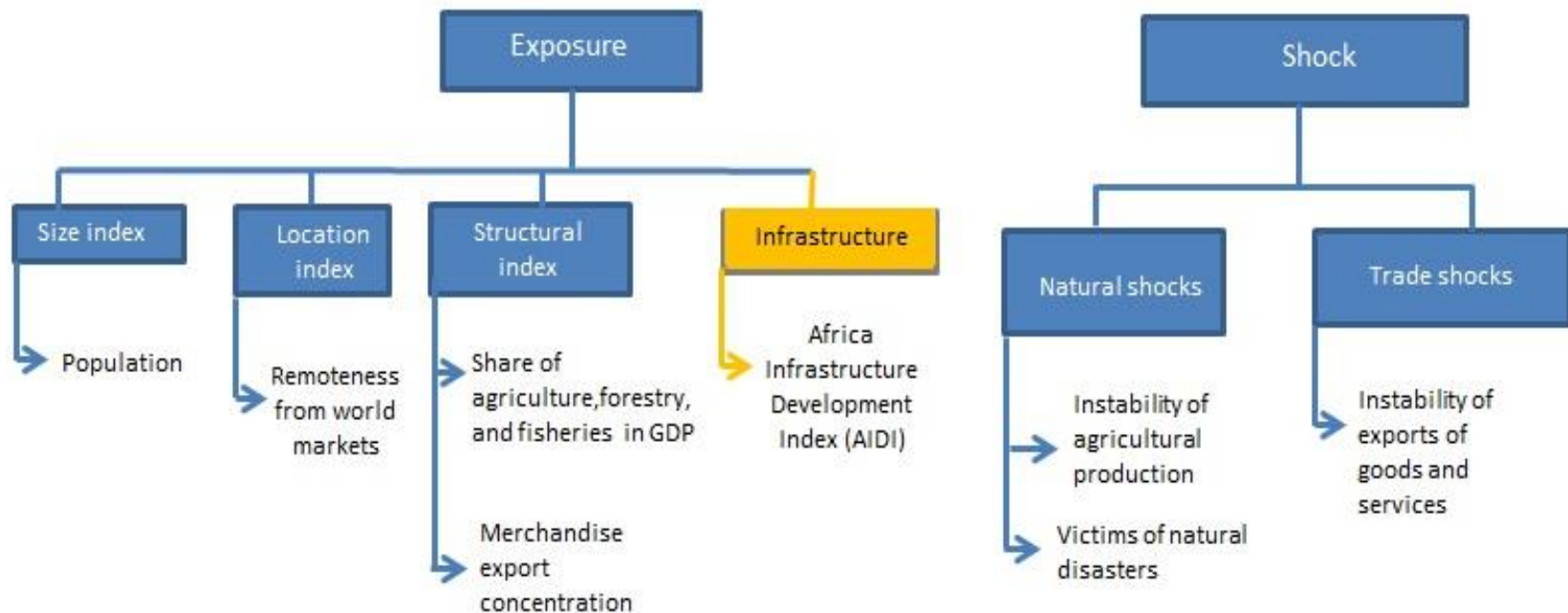
Vulnerability and Resilience

- General vulnerability also depends on the capacity to react, which mainly depends on policy, leading to keep vulnerability aside.
- But the capacity to react to some extent also depends on structural factors, the « structural resilience ».
- These structural factors of resilience are broad factors, captured in the formula by the levels of income pc (tells us how well the inhabitants of a country are able to face climatic and economic shocks on average) and human capital (influences the ability of countries to respond to shocks), as they are in LDC criteria).
- To be noted , GNIpc and the Human Assets Index (HAI) are included along with structural vulnerability indicators in this framework, taking into account the needs but also resilience.
- Including resilience directly in the vulnerability index would blur the specificity of the vulnerability concept.

Economic vulnerability

- *Structural economic vulnerability* could be captured by the Economic Vulnerability Index (EVI) used by the UN for the identification of LDCs and recommended for aid allocation by UN GA.
- Captures only structural components of vulnerability, chosen with regard to their expected (or evidenced) effect on economic growth
- Transparent and parsimonious, EVI relies on:
 - 4 main (structural) exposure components (ex ante vulnerability)
 - 3 (exogenous) shock components, measuring past recurrent shocks, likely to re-occur in the future and to already hamper future economic growth
- However, some modifications to the index are needed to make it consistent with the other indices notably the index of vulnerability to climate change but also to tailor it to the specific characteristics of Africa.
- Among other possibilities we use the 2006-2009 version of the UN EVI, but add an additional component to the exposure sub-index to account for the level of infrastructure.

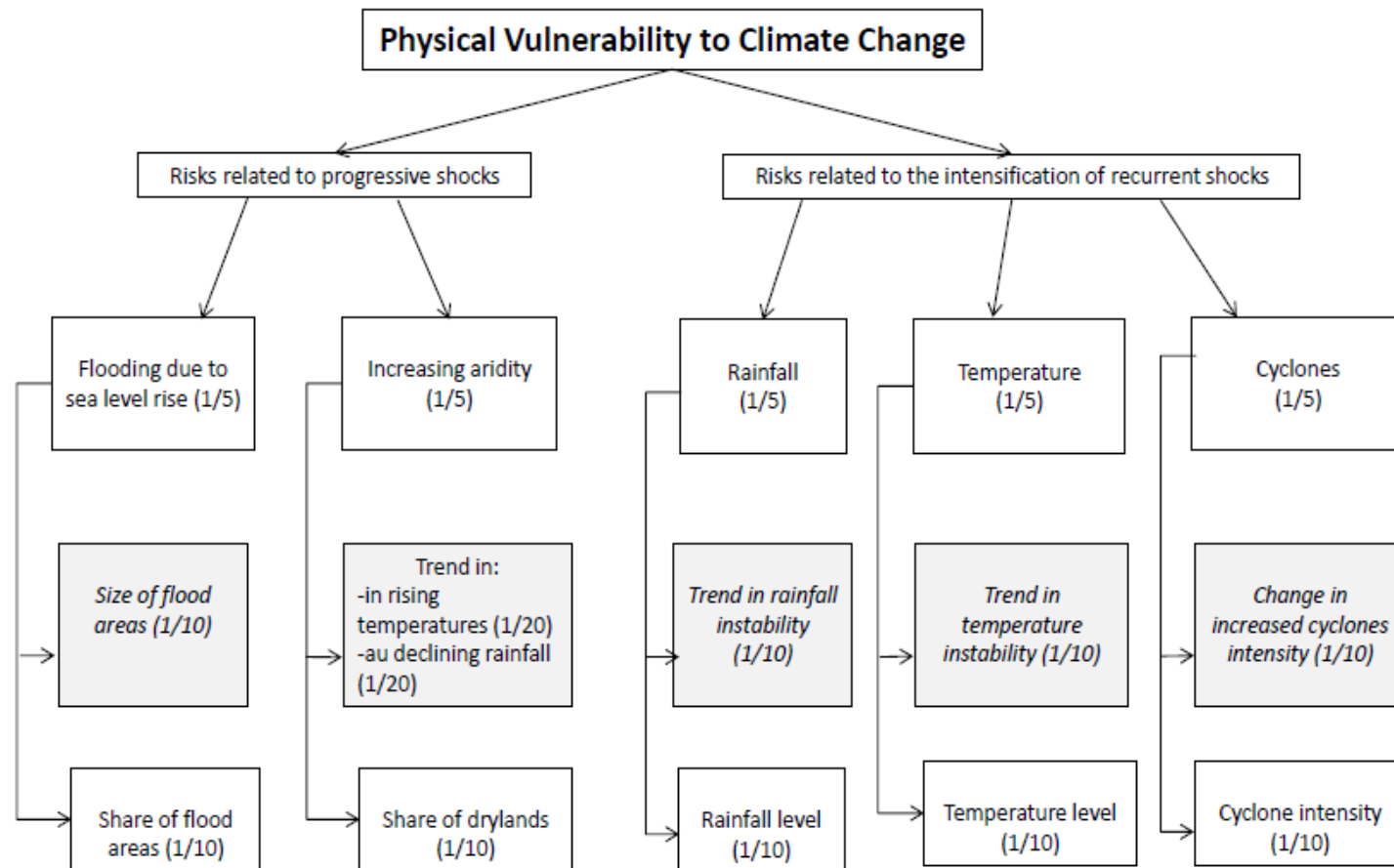
Economic Vulnerability Index (EVI)



Vulnerability to Climate Change

- Forward-looking and likely to capture long term risks
- Relies only on geo-physical components, without any debatable socio-economic component
- So does not include components reflecting the adaptive capacity
- Makes a distinction between two kinds of risks due to climate change
 - risks related to progressive shocks (such as over-aridity) and
 - risks related to the intensification of recurrent shocks (in rainfall or temperature)
- Makes another distinction between the shocks (trend) and the exposure to the shocks (past shocks) , and, because the impact of the shocks depends on the initial exposure, uses a geometric averaging.
- Takes into account asymmetric shocks.
- Adaptive capacity is kept aside.

Physical Vulnerability to Climate Change Index (PVCCI)



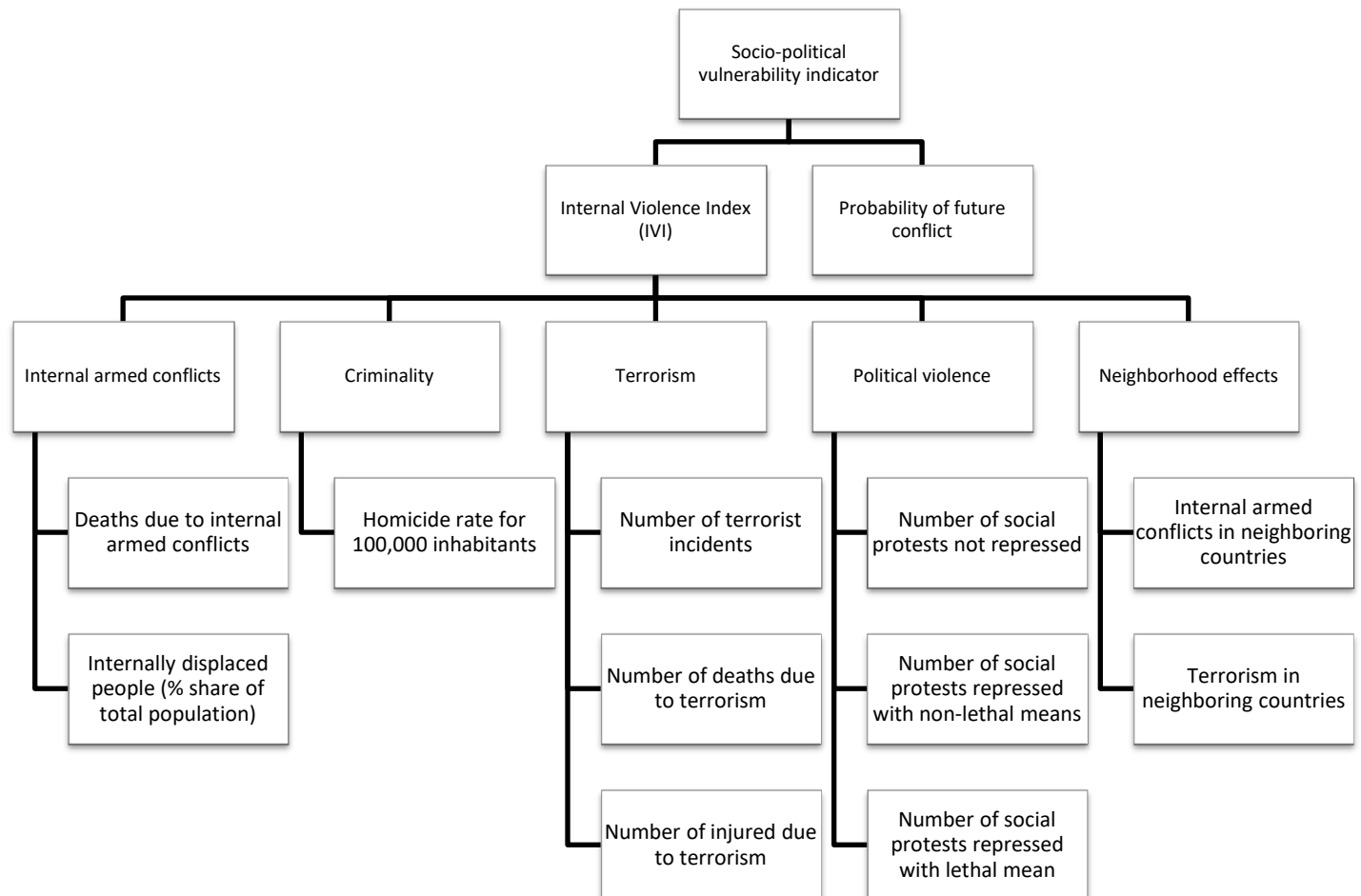
Socio-political vulnerability

- *Usually proxied* by complex and competing indicators (eg Fragile states index, F.S.I.; Country indicators of foreign policy, C.I.F.P.; etc.) which most often mix many components a large part of which are not “structural” but linked to the present policies and/or involve a subjective assessment, ie mix structural needs and performance indicators
- For the socio-political vulnerability it is indeed difficult but needed to *disentangle structural (more exogenous) components from policy ones*.
- An alternative approach proposed is first to assess an “exogenous” political vulnerability from *internal violence events* which by their frequency and depth reveal political vulnerability. It is an outcome-based vulnerability index rather more than a structural index.
- A better possible indicator proposed is an Internal Violence Index (IVI), a well focused *index of results, supplemented by a risk indicator of future violence*.

Taking into account the structural risk of conflict

- IVI is an indicator of contemporaneous violence in a country. It represents the recent history in terms of violence (T, T-4). It is a rather retrospective indicator considering the delay in data availability for some components.
- IVI thus represents more a measure of past "shocks" of violence than real exposure to shocks. Thus an exposure component would also be necessary in order to measure fragility preventively (along with other indicators).
- A component of structural *risk* of violence would allow IVI to measure both shocks and exposure, reinforcing its structural content.
- This structural component is proxied here by the *probability of future conflict* in the future 5 years estimated by taking into account structural as well as historical factors and using classification trees.

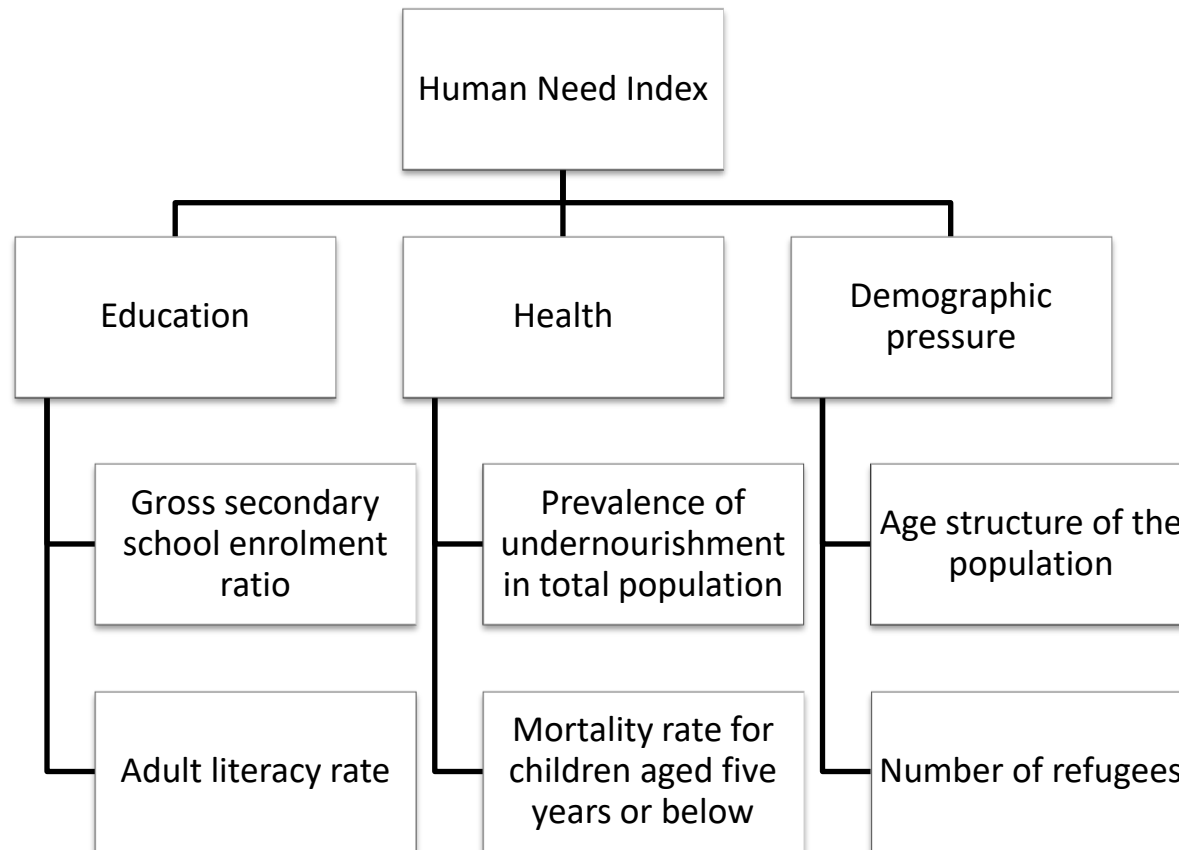
Internal Violence Index (IVI)



A new indicator of specific needs

- Needs mainly reflected through the GNI per capita in the PBA formula...Forgetting the various dimensions of poverty.
- Diagnosis already made by the ADB as illustrated by the new two step approach for the TSF eligibility that takes into account GDP growth, and also human capital. The allocation formula should consistently include indicators of need reflecting various dimensions of poverty
- The Human Assets Index (HAI) including health and education components used by the UN to identify LDCs well adapted to be used in addition to the GNI pc
- But here supplemented by 2 indicators of “demographic pressure”: the *youthfulness of the population* and the *number of refugees*, 2 more exogenous components of a “Human Needs Index”

Human Need Index (HNI)



The PVBA – Simulation Framework

- The simulations start from the ADF's allocation model based on 2017 data.
- The impact of the new conceptual framework for allocations is presented as *a percentage of the total envelope at the end of the first phase of the allocation process* (incentives for loans, MDRI, minimum allocation).
- Also applied here are the ceiling of 10% of the total envelope by country, and the discounts for blend countries (-50%) as well as graduating ones (70%)

The PVBA – Three options

$$A_i = CPA^{4.125} \times GNIpc_i^{-0.125} \times Pop_i^1 \times VI_i^{0.5} \times HNI_i^{0.25} \quad (1)$$

$$A_i = CPA^{4.125} \times GNIpc_i^{-0.125} \times Pop_i^1 \times VI_i^1 \times HNI_i^{0.5} \quad (2)$$

$$A_i = CPA^{4.125} \times GNIpc_i^{-0.125} \times Pop_i^1 \times VI_i^2 \times HNI_i^1 \quad (3)$$

with

$$CPA = \begin{cases} 0.20 \times CPIA_{ABC} + 0.58 \times CPIA_D + 0.06 \times CPIA_E + 0.16 \times PPA \\ 0.36 \times CPIA_{ABC} + 0.58 \times CPIA_D + 0.06 \times CPIA_E \text{ if no portfolio} \end{cases}$$

$VI_i = 0.33 EVI_i + 0.33 PVCCI_i + 0.33 IVI_i$, synthetic structural fragility index.

A_i : Aid allocated to country under the PBA (or TSF's Pillar I)

GNI/P: gross national income relative to the population

CPA: Country Policy Assessment

CPIA: Country Policy and Institutional Assessment (ABC, D, E Clusters)

PPA: Portfolio Performance Assessment

AIDI: African Infrastructure Development Index

VI: Vulnerability Index (Composite)

EVI: Economic Vulnerability Index

PVCCI: Physical Vulnerability to Climate Change Index

IVI: Internal Violence Index

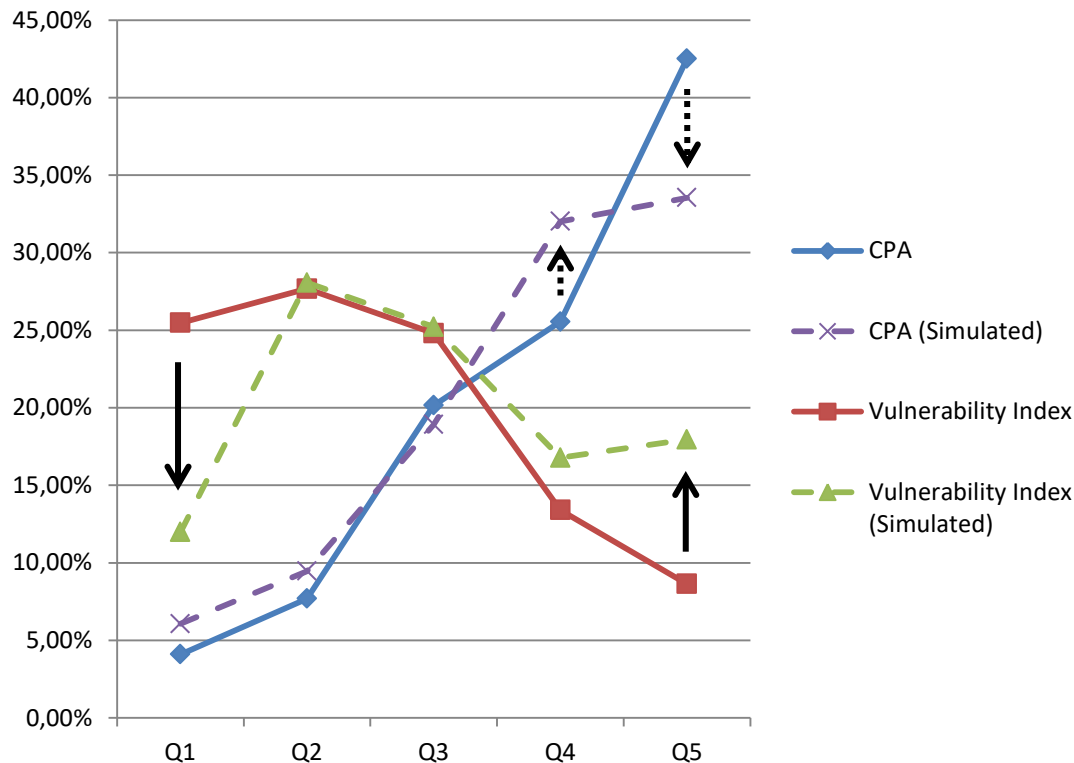
The PVBA – Key Result n°1

Simulations allow to maintain a positive relationship between allocation and performance while giving more to more vulnerable countries.

This is made possible by favoring vulnerable and performing countries at the expense of performing but less vulnerable ones.

The PVBA – Key Result n°1 (graph)

Share of base allocations in the total ADF envelope based on current value and value simulated by Formula 3 of CPA quintiles and the overall Vulnerability Index (VI)



- The positive link between performance and allocation, which is essential in the PBA, is maintained.
- The relationship between vulnerability and allocation is modified.
- The performing and vulnerable countries are then favored at the expense of the performing but less vulnerable countries.

III - What are the findings of the simulations?

The PVBA – Key Result n°2

Simulations allow
to maintain the share allocated to the two best CPIA quintiles
over 65% (the best performing countries)
and at the same time to increase the share allocated to the
two more vulnerable quintiles from 22% to 35%.

III - What are the findings of the simulations?

The PVBA – Key Result n°2 (table)

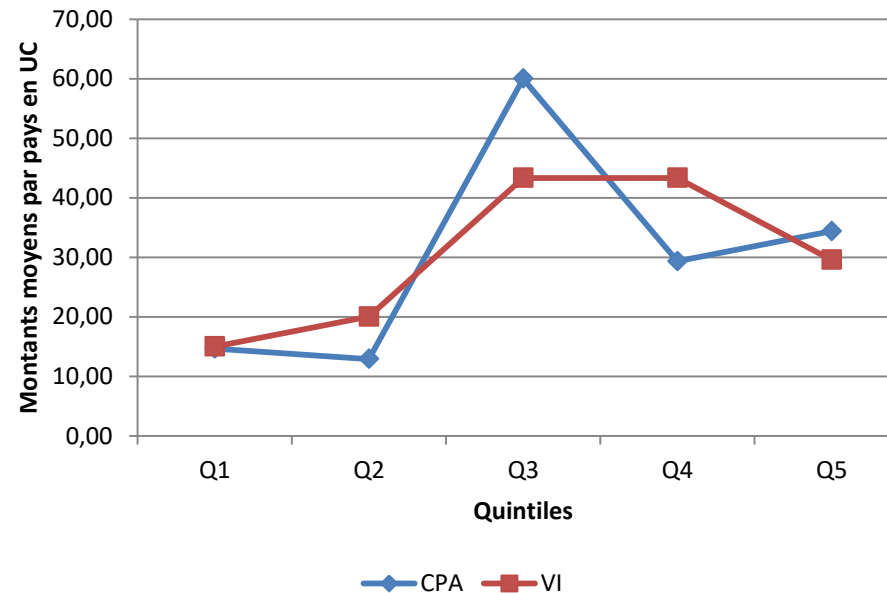
Share of base allocations in the total ADF envelope by CPA and overall vulnerability index (VI) quintiles; current values and values simulated by formulas (1), (2), (3)

CPA	Current PBA	Formula (1)	Formula (2)	Formula (3)
Q1	4.10%	4.79%	6.03%	6.07%
Q2	7.69%	6.46%	6.40%	9.46%
Q3	20.15%	19.04%	18.16%	18.91%
Q4	25.55%	28.93%	31.19%	32.01%
Q5	42.51%	40.77%	38.22%	33.55%
Q4 + Q5	68.06%	69.71%	69.41%	65.56%

Vulnerability Index	Current PBA	Formula (1)	Formula (2)	Formula (3)
Q1	25.48%	23.32%	21.37%	11.98%
Q2	27.67%	27.70%	25.83%	28.07%
Q3	24.81%	26.37%	26.83%	25.21%
Q4	13.41%	12.11%	12.14%	16.78%
Q5	8.64%	10.51%	13.83%	17.96%
Q4 + Q5	22.04%	22.61%	25.97%	34.74%

- While in 2017 the two most vulnerable quintiles among ADF-eligible countries received 22% of PBA allocations, they would have received 35% with the Simulation (3), 26% with the Simulation (2), but only 23% under Simulation (1).
- As for the two best-performing quintiles, while they received 68%, they would have received 66% under Simulation (3), 69% under Simulation (2), and 70% under Simulation (1).

TSF Pilar I

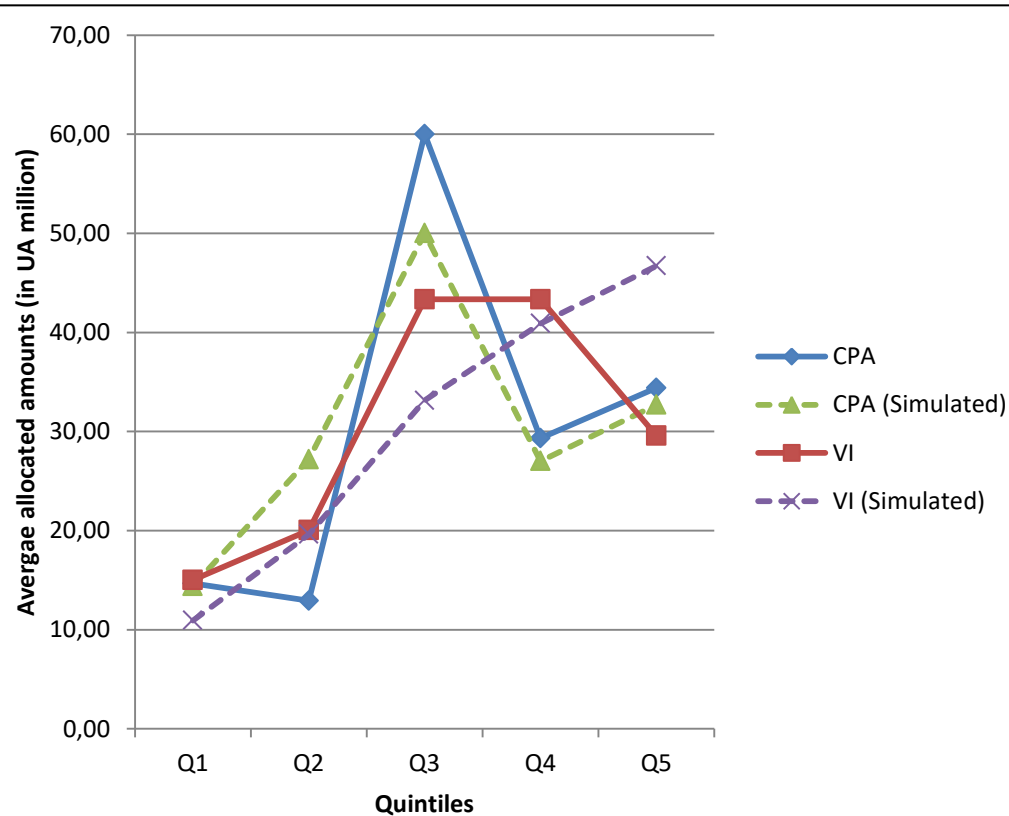


- The current Pillar I allocation is correlated with the composite vulnerability indicator but has a non-linear profile that is difficult to justify. In addition, the allocation is also loosely correlated with performance.
- Using the PVBA framework to reallocate ADF14 TSF Pilar I using:

$$A_i = CPA^1 \times GNIpc_i^{-0.125} \times Pop_i^1 \times VI_i^2 \times HNI_i^1$$

with $VI_i = 0.33EVI_i + 0.33PVCCI_i + 0.33$

TSF Pilar I



- Simulations of allocations of TSF Pilar I under the new formula, especially when equal weight is given to fragility and performance, show that among the countries eligible to the TSF this approach...
- ...strengthens the allocation to the most fragile ones according to the synthetic index of structural fragility, ...
- ...while (within the TSF) it still evidences a positive link between performance and allocation.

TSF Pilar I – Key Result n°3

Thanks to a continuous application of criteria, the allocation of Pillar I becomes closely correlated with vulnerabilities, which is currently not the case.

Conclusion

- Simulations show that the formulas proposed for the new PVBA *combine* the principle of an allocation increasing with the quality of policies (i.e., performance) and that of an allocation increasing with vulnerability.
- Such a reform of the PBA is made consistent with the objectives of transparency, equity, and effectiveness by taking into account the needs of countries resulting from various forms of vulnerability and their uneven intensity, its implementation is perfectly *possible*.
- Moreover, the coexistence of a “Performance and vulnerability based allocation” and a special facility in favor of fragile States allows targeting its limited resources on the *specific needs of countries in transition*.



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