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FOR SUSTAINABLE DEVELOPMENT



Vulnerability Indicators for Aid Allocation

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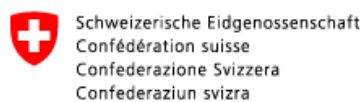
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ABSTRACT

Any donor has a model for allocating assistance to developing countries. The model is implicit, most often so for bilateral donors, or explicit, most often so for international institutions. Why this difference? Because bilateral assistance is discretionary, while multilateral one should reflect a consensus among members. An explicit model or formula is a way by which this consensus can be expressed. Any normative model for the allocation of multilateral (or global) assistance should rely on indicators and criteria corresponding to two main principles—equity between receiving countries; and effectiveness in the use of the resources transferred. Appropriate indicators should be designed from this perspective and combined according to policy preferences. The most usual formula used by multilateral development banks (MDBs) is performance-based allocation (PBA). It gives a major weight to so-called “performance,” with the view it enhances the effectiveness of aid. But, as it is measured, this performance is not really performance, and it is not clearly a factor in aid effectiveness. This paper argues that taking vulnerability into account helps meet the principles mentioned above, provided that appropriate indicators are designed with this aim. It examines why vulnerability indicators are needed for allocating development assistance, and which vulnerability indicators are needed for doing so. Doing that, it extends the argument from usual official development assistance (ODA) to concessional resources for adaptation to climate change.

In each case the choice of the index of vulnerability should depend on the goal pursued. What is needed is an index likely to be used (besides other criteria) to allocate resources (to allocate more to the more vulnerable countries). It should be independent of policy—countries more vulnerable because of a poor present or expected policy/resilience should not be rewarded for that. For the allocation of ODA the UN's Economic Vulnerability Index is supposed to meet this condition. For the allocation of adaptation resources, since vulnerability to climate change is quite a long-term one, it should preferably be captured through physical components. This is the main feature of the recent Ferdi Physical Vulnerability to Climate Change Index, which distinguishes it from other attempts. The PVCCI is forward looking and likely to capture long-term risks. It relies only on geo-physical components, without any debatable socio-economic component. It makes another distinction between the size of the shocks and exposure to shocks because the impact of shocks depends on initial exposure. Moreover, to take into account the diversity of the sources of vulnerability, each of which may have a high impact independently of the others, the index gives more weight to the component reflecting a higher vulnerability by using quadratic averaging.

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LIST OF ABBREVIATIONS

CDP	Committee for Development Policy
CPIA	Country Policy and Institutional Assessment
EVI	Economic Vulnerability Index
GNIpc	gross national income per capita
HAI	Human Assets Index
LDCs	least developed countries
LECZ	low coastal zone
MDBs	multilateral development banks
MDGs	Millennium Development Goals
ODA	official development assistance
PBA	performance-based allocation
PVCCI	Physical Vulnerability to Climate Change Index
SIDS	small island developing states
UN	United Nations

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INTRODUCTION

Any donor has a model for allocating assistance to developing countries. The model is implicit, most often so for bilateral donors, or explicit, most often so for international institutions. Why this difference? Because bilateral assistance is discretionary, while multilateral one should reflect a consensus among members. An explicit model or formula is a way by which this consensus can be expressed.

Any normative model for the allocation of multilateral (or global) assistance should rely on indicators and criteria corresponding to two main principles—equity between receiving countries; and effectiveness in the use of the resources transferred. Appropriate indicators should be designed from this perspective and combined according to policy preferences.

The most usual formula used by multilateral development banks (MDBs) is performance-based allocation (PBA). It gives a major weight to so-called “performance,” with the view it enhances the effectiveness of aid. But, as it is measured, this performance is not really performance, and it is not clearly a factor in aid effectiveness.

We argue that taking vulnerability into account helps meet the principles mentioned above, provided that appropriate indicators are designed with this aim.

We examine why vulnerability indicators are needed for allocating development assistance, and which vulnerability indicators are needed for doing so. Doing that, we extend the argument from usual official development assistance (ODA) to concessional resources for adaptation to climate change.

WHY VULNERABILITY INDICATORS ARE NEEDED FOR ALLOCATING DEVELOPMENT ASSISTANCE

THE PRESENT DEBATE ON THE GEOGRAPHICAL ALLOCATION OF DEVELOPMENT ASSISTANCE

The traditional wisdom is dominated by PBA—aid should be mainly allocated to countries according to their “performance.” PBA is a formula used by the MDBs (and some bilateral donors) for the allocation of their concessional resources, with performance mainly measured from the Country Policy and Institutional Assessment (CPIA). PBA is also a kind of general principle on which the international community is supposed to agree. But it is strongly debated, and far from being fully applied (see Guillaumont and Wagner 2015).

Why a debate?

PBA gives overwhelming weight to the assessment of policy and governance of recipient countries (through the CPIA and mainly its governance component). It does not take into account their vulnerability, or their distance to the Millennium Development Goals (MDGs) (in particular in health and education).

In spite of criticisms, several main donors are reluctant to change. However, ideas are moving and there is a better appreciation of the need to take vulnerability into account, as illustrated by various United Nations (UN) Secretary General reports to the Development Cooperation Forum (since 2008 and 2010).

Taking into account structural vulnerability would improve PBA for five reasons.

- (i) It would restore the real meaning of performance (results with regard to initial and exogenous conditions).
- (ii) It would enhance equity by compensating for structural handicaps.
- (iii) It would draw lessons from aid effectiveness literature, which shows a higher marginal effectiveness in countries vulnerable to external shocks (through a dampening effect of aid inflows).

- (iv) It would increase transparency by limiting exceptions, more and more important in PBA.
- (v) It would favor the stability, predictability, and counter-cyclicity of foreign resource inflow.

Towards an improvement

There is then a robust rationale for taking structural vulnerability, as well as a low level of human capital, into account in aid allocation, besides an appropriate indicator of “performance,” which would receive a lower weight than at present. Doing that would meet the principles of equity, effectiveness, and transparency.

It can be done by using available and commonly agreed indicators of structural economic vulnerability and human capital, such as those used at the UN for the identification of least developed countries (LDCs), along with the gross national income per capita (GNIpc). Donors have explicitly been invited to do so in December 2012 by a UN General Assembly resolution on the smooth transition of graduating LDCs (A/C.2/67/L.51). And the European Commission has done it for allocations of the new European Development Fund and Development Cooperation Instrument. Of course, it is always possible to improve or adapt the index of structural economic vulnerability, as explained below.

PERFORMANCE VS VULNERABILITY, ALSO AN ISSUE FOR CLIMATE CHANGE FUNDING

More and more resources will be devoted to the adaptation to climate change. The allocation of these resources faces the same issue as ODA—it is also ruled by performance/policy (for example, the Global Environment Fund), with a specific reference to environment policy, but without a clear rationale.

Since low-income countries are not responsible for climate change, it is equitable that the concessional funds for adaptation be allocated mainly according to their vulnerability to climate change. It should be done through an indicator not dependent on policy. A weak capacity to adapt for structural reasons, also a factor of structural vulnerability, could be considered separately and captured by the GNIpc and an index of human capital.

Criteria for the allocation of adaptation resources: common features with ODA

A weak capacity to adapt for reasons not depending on present policy (that is, a low structural resilience), in both cases considered separately and captured through the low level of GNIpc and human capital, legitimates a higher allocation.

will lead to a lower allocation (with a weight smaller than that now given to “performance” in PBA). Weak performance may also lead to specific modalities of support (projects vs budget).

Comparison of vulnerability as an allocation criterion for adaptation resources and for ODA

It seems that a physical vulnerability criterion if perceived as more clearly exogenous could be more easily accepted for adaptation resources than a structural economic vulnerability criterion for ODA. Could ODA allocation then be influenced by climate adaptation?

Reference to effectiveness (“performance”) will in both cases be needed, but it is not clear what kind of performance is relevant in each case, in particular for the adaptation to climate change. Is it environmental performance (it is a moral, but a debatable argument)? Is it general performance (the same factors have an impact on development and adaptation)? A differentiation is more logical if a performance assessment includes an assessment of project implementation, as far as projects differ.

Mixing the two allocation processes?

Economic development and adaptation to climate change in poor countries are very close goals. Although additionality is officially supposed, there is a risk of the two kinds of resources turning into partial substitutes. If they were merged, their geographical allocation would need to be treated simultaneously and the two kinds of vulnerability be measured through a synthetic index (while the allocation for mitigation would be treated differently). Anyway, a trade-off between medium-term development and long-term adaptation goals is inescapable, and that would be reflected in the time horizon and the component weights of the index.

DESIGNING INDICES OF VULNERABILITY FOR AID ALLOCATION

To be used for the allocation of concessional resources, indicators of country vulnerability should not depend on present policy. They should primarily reflect both the likely size of the shocks and the country exposure to these shocks. They should capture either a medium-term economic vulnerability or a long-term physical vulnerability to climate change.

We focus on two indicators already calculated as indices—the Economic Vulnerability Index (EVI), set up by the UN Committee for Development Policy (CDP); and the Physical Vulnerability to Climate Change Index (PVCCI), set up at the Fondation pour les Etudes et Recherches sur le Développement International (Foundation for International Development Study and Research; Ferdi).

STRUCTURAL ECONOMIC VULNERABILITY AS MEASURED BY THE ECONOMIC VULNERABILITY INDEX

Designed by the UN CDP for the identification of LDCs, the EVI was set up in 2000, then revised, mainly in 2005, then again slightly in 2011. It captures only the structural components of vulnerability, chosen with regard to their expected (or evidenced) effect on economic growth. Transparent and parsimonious, the EVI relies on four or five main (structural) exposure components (ex ante vulnerability) and three (exogenous) shock components, measuring past external and natural recurrent shocks likely to re-occur in the future and already hampering future economic growth.

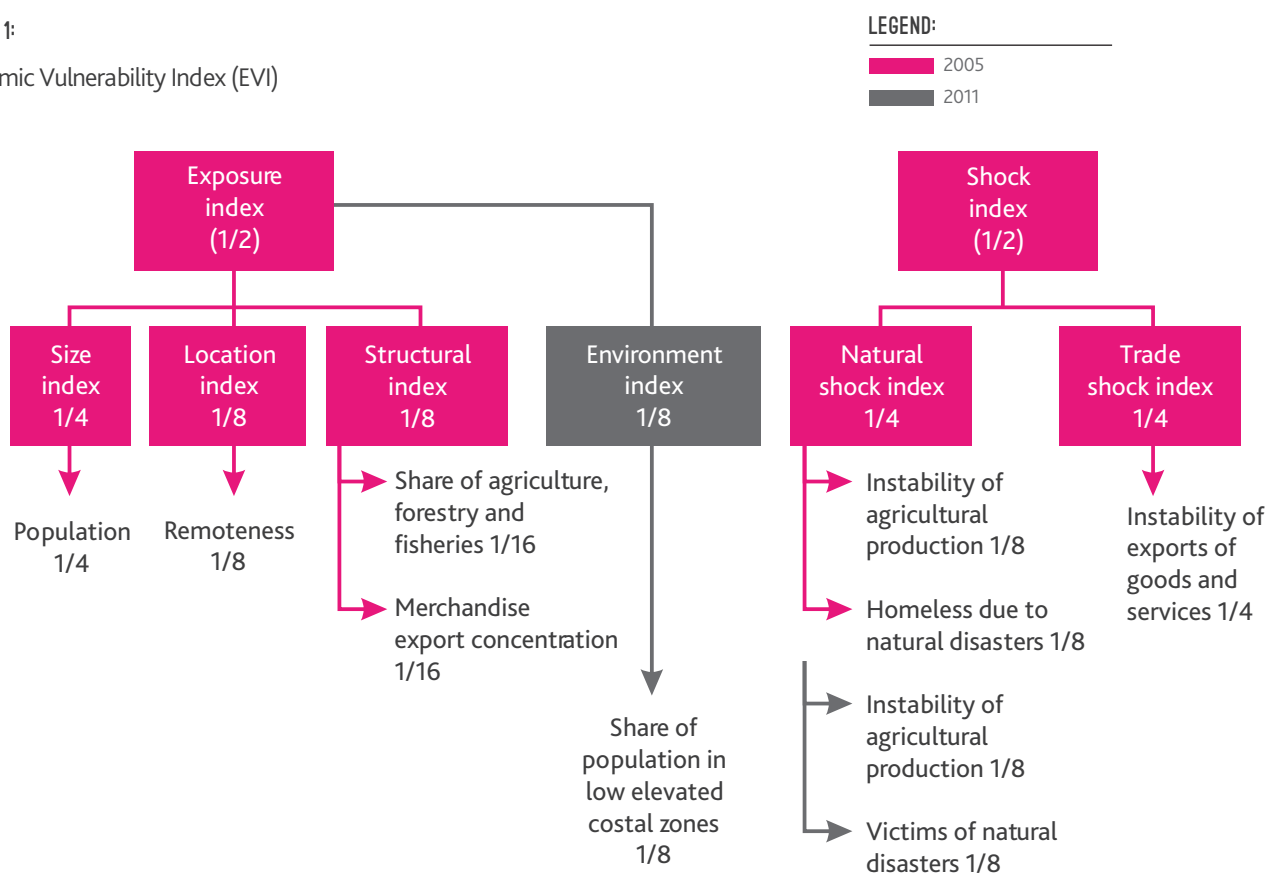
Recent changes ... and challenges

But the addition appears unbalanced with respect to dryland countries—their vulnerability is underestimated compared to that with the previous definition (as well as that of that of some small island developing states [SIDS] with a small LECZ index). An alternative measure proposed by the Ferdi simply replaces the LECZ component by its average with the share of dryland in non-desertic areas (Guillaumont 2014). Other adjustments in the EVI would be welcome to better take into account various forms of vulnerability (in particular, the risk of flooding due to ice smelting in countries such as Bhutan and Nepal) (Guillaumont 2015).

Since views on the most relevant measure of the EVI may differ among donors, each donor may be inclined to have its own index, easily obtained through programmes such as “Build your own EVI” set up at the Ferdi and available on its website.

FIGURE 1:

Economic Vulnerability Index (EVI)



Structural resilience kept aside... or included in a broader concept of structural vulnerability

General vulnerability also depends on the capacity to react, indeed is dependent on present policy (in the main part), but also on structural factors, or "structural resilience." The structural factors of resilience are broad—to a large extent captured by separate indicators, in particular the GNIpc and the Human Assets Index (HAI), which are used with the EVI as complementary criteria for the identification of LDCs or additional criteria for aid allocation. It is possible to include them in a broader concept of vulnerability we have called the "structural handicap index" (Guillaumont 2009), and also available on the Ferdi website. But this raises a risk of blurring the specificity of the vulnerability concept.

Economic vulnerability and vulnerability to climate change

Vulnerability to climate is already taken into account through two components of the EVI (population affected by natural disasters, and instability of agricultural production), and now more specifically by the risk of being flooded due to a rise in the sea level (the LECZ component). But the vulnerability to climate change differs from economic vulnerability by its nature (more physical) and time horizon (longer)—it reflects a long-term risk of change in geo-physical conditions, not a structural handicap to economic growth in the medium term.

And it is a vulnerability to only one (major) environmental factor—there are of course other possible factors (for example, earthquakes).

Which index of vulnerability to climate change is needed

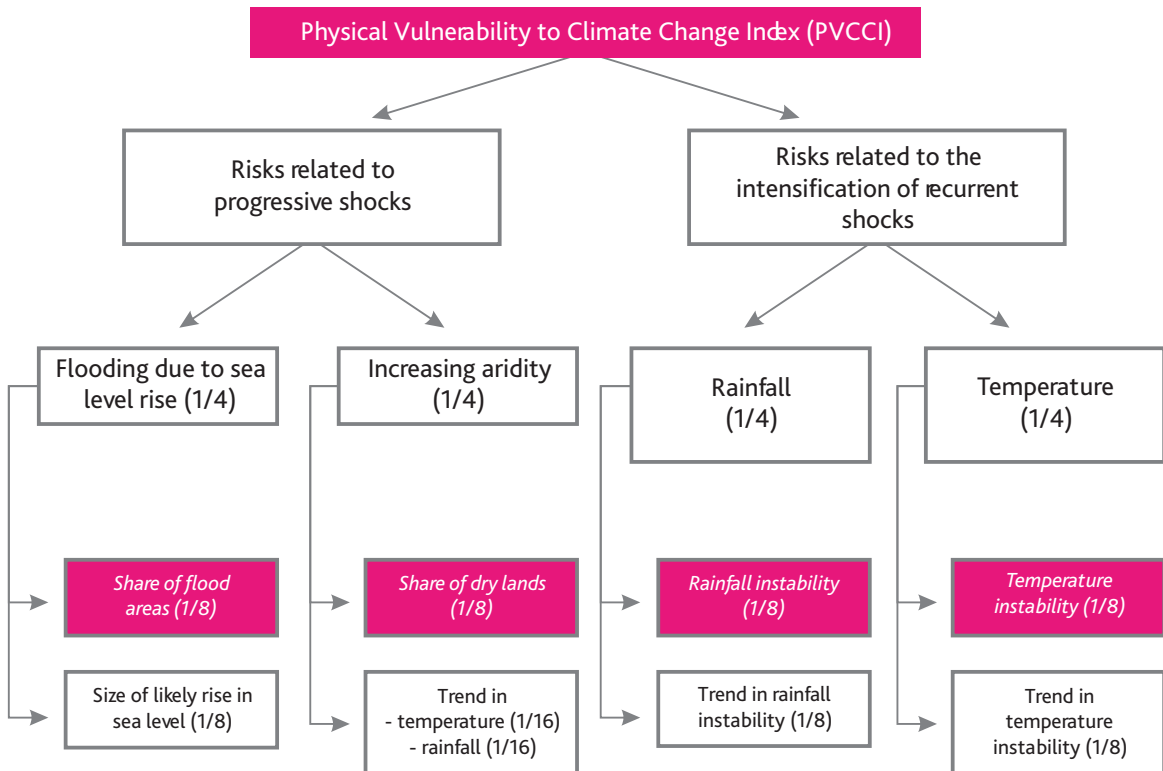
The choice of the index of vulnerability to climate change should depend on the goal pursued (indeed many indices are available). What is needed here is an index likely to be used (besides other criteria) to allocate resources for adaptation (to allocate more to the more vulnerable to climate change). It should be independent not only of the current policy (as the EVI), but also of future policy—countries more vulnerable because of a poor present or expected policy/resilience should not be rewarded for that. Since vulnerability to climate change is quite a long-term one, it should preferably be captured through physical components. This is the main feature of the recent Ferdi PVCCI), which distinguishes it from other attempts (CGD 2011, Barr et al. 2010).

PHYSICAL VULNERABILITY TO CLIMATE CHANGE INDEX: MAIN FEATURES

The PVCCI is forward looking and likely to capture long-term risks. It relies only on geo-physical components, without

FIGURE 2:
Physical Vulnerability to Climate Change Index

Note: The boxes corresponding to the two last rows of the graph respectively refer to exposure components (in italics) and to the side of the shocks components.



any debatable socio-economic component. As such it does not include components reflecting adaptive capacity. And it makes a distinction between two kinds of risks due to climate change—the risks related to progressive shocks (such as sea level rise or desertification); and the risks related to the intensification of recurrent shocks (such as rainfall or temperature shocks, or typhoons).

The PVCCI makes another distinction between the size of the shocks and exposure to shocks because the impact of shocks depends on initial exposure. Moreover, to take into account the diversity of the sources of vulnerability, each of which may have a high impact independently of the others, the index gives more weight to the component reflecting a higher vulnerability by using quadratic averaging. Nevertheless it is still tentative (with changes in progress).

Adaptive capacity and resilience, again kept aside

A (weak) adaptive capacity is often considered as a part of climate vulnerability indicators. As economic resilience, it depends on various structural factors, and is not determined only by present policy factors. Once again, the structural factors of resilience are very broad—including them would lower the specificity of the vulnerability concept. It seems better to take them into account separately through indicators such as the GNIpc or the HAI. The same applies to economic resilience with the EVI.

Mixing the two indices?

There is a rationale for having two separate indices—the time horizon is different, and the scope is different (economic vs geo-physical impacts). However, a fusion in an extended structural vulnerability index combining the two indices is conceivable (there is only one redundant component in the EVI, which could be deleted). The relative weight then given to each of the two indices would reflect the time preference of users as well as their relative concern about economic growth and environment stability. So the relevance of integrating the indices depends on their use for international policies.

CONCLUSION

Since there is a rationale for taking structural economic vulnerability into account in the allocation of ODA, and the vulnerability to climate change in the allocation of concessional resources for adaptation, appropriate indices of country vulnerability are needed, which depend on structural or physical factors, not on the present will of the country. In other words, allocation should be increased only for an exogenous vulnerability.

Indices are available to be used with this aim. One is the UN EVI for ODA allocation. Another one is the PVCCI of the Ferdi for the allocation of concessional resources for adaptation. Each index has drawbacks and limitations, but each of them can easily be revised and augmented according to the principles on which allocation should rely. Indications have been provided on possible revisions. Moreover, each of them can be revised and adapted to a user's preferences through the "Buy your own vulnerability index" programme proposed by the Ferdi.

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