Caught in a trap. Identifying the LDCs

Launch of a book

by

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Why this book?

- UN recognizes 49 countries as « LDCs » a category created in 1971
- As such they deserve special treatment from the international community (trade preferences, aid,..), the category being used in and out of the UN system, and UN conferences have been devoted to them (1981, 1990, 2001,…2011)
- The *rationale* of the category has been underestimated, and often is not clearly understood
- Its *impact* is sometimes overestimated, is still limited and needs to be enhanced
- A book to enlighten the rationale in view to enhance the impact: *Caught in a trap.Identifying the LDCs*
- A forthcoming companion volume: *Out of the Trap. Supporting the LDCs* will assess the impact of membership and and suggest ways to reinforce it

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Out of the trap
Supporting the least developed countries

Edited by Patrick Guillaumont

Two precisions

- French version available in one month:

  Pris au piège. Identifier les pays mes moins avancés

- Although the book includes many tables, several others, as well as those of the book, are available on the FERDI website

- www.ferdi.fr/caught-in-a-trap.html

How has it been prepared?

- LDCs are identified at UN by the Committee for Development Policy (CDP), in charge of designing the criteria and applying them at each triennial review of the list and during the last 12 years an expert group set up by UN DESA has been preparing the work of the CDP on the identification of LDCs

- Due to CDP membership and chairmanship of the EG, the book has been prepared in close cooperation with UN DESA, and thus gives an insight, although fully independent, view

- Acknowledgements to DESA, UNDP and French government, as well as all who give inputs and assistance

What is argued?

- LDCs are designed as low-income countries suffering most from structural handicaps to growth
- As such they are the most likely to stay poor or « caught in a trap »: for structural reasons (independent from their present will), they are the « least likely to develop » countries and for that deserve special treatment
- Understanding the nature and interaction of these structural obstacles is crucial for the rationale of the category and the policy applied
- The criteria designed for the identification of the LDCs can be used to other purposes, in a less discontinuous way

Four parts in the presentation

- Historical perspective

- Rationale for a category

- Options for identifying the least developed countries

- (Use of the criteria beyond the category)

Presentation as a list of issues addressed in the book

(I) Historical perspective

- Needed to understand the nature of the category and the main issues it raises

- A category created in 1971 by the UN, and the only official subgroup of developing countries

- Recognized and used by the international community

What and where are the LDCs?

- 25 countries in 1971, 50 in 2003, 49 to day
- 11% of world population, less than 1% of world GDP (1.6% in PPP)
- 17 landlocked and 12 island states
- 34 in Africa, 8 in Asia, 6 in the Pacific, 1 in the Carribean
- Mainly, but not exclusively an African group and 19 African countries are not LDCs
- African LDCs are a little more than 2/3 of LDCs and a little less than 2/3 of African countries

Do LDCs differ from fragile states?

- One definition of LDCs, many for FS
- LDCs, very different concept, structural category not related to present policy and less transitory
- FS, category relying on assessment of policy failure
- However all LDCs have once been fragile states by one or another definition, and many are still so
- Structural features of LDCs make them at risk to become fragile states

How are selected the LDCs?

- UN official category, relying on three main criteria

- CDP makes recommendations to ECOSOC for decision by GA

- Since 1991, triennial reviews of the list

  for possible inclusions *and* graduations

- Since the origin, though modified over time, three independent criteria, one low income per capita criterion, two structural handicaps criteria

What are the present criteria?

- Three *complementary* criteria for inclusion
- GNIpc (fixed low income threshold of the WB)
- Two indicators of structural handicap
  - HAI (Human Assets Index)
  - EVI (Economic Vulnerability Index)

with relative thresholds corresponding to the quartile of a reference set of LDCs and other low-income countries,

making LDCs low-income countries with relatively high structural handicaps to grow

How graduation differs from inclusion? The asymmetry

- For inclusion, needed to meet the three criteria (complementary)

- For graduation, four precautions to insure the sustainability of progress and avoid disruption effects:
  - a country should fail to meet two, rather than only one, of the three criteria (asymmetry)

  - thresholds for graduation differ by a margin from those for inclusion;
  - to be recommended for graduation a country has to be found eligible at two successive triennial reviews…
  - and graduation takes place only after three years

The asymmetry

FIGURE

Criteria for inclusion and graduation in 2009
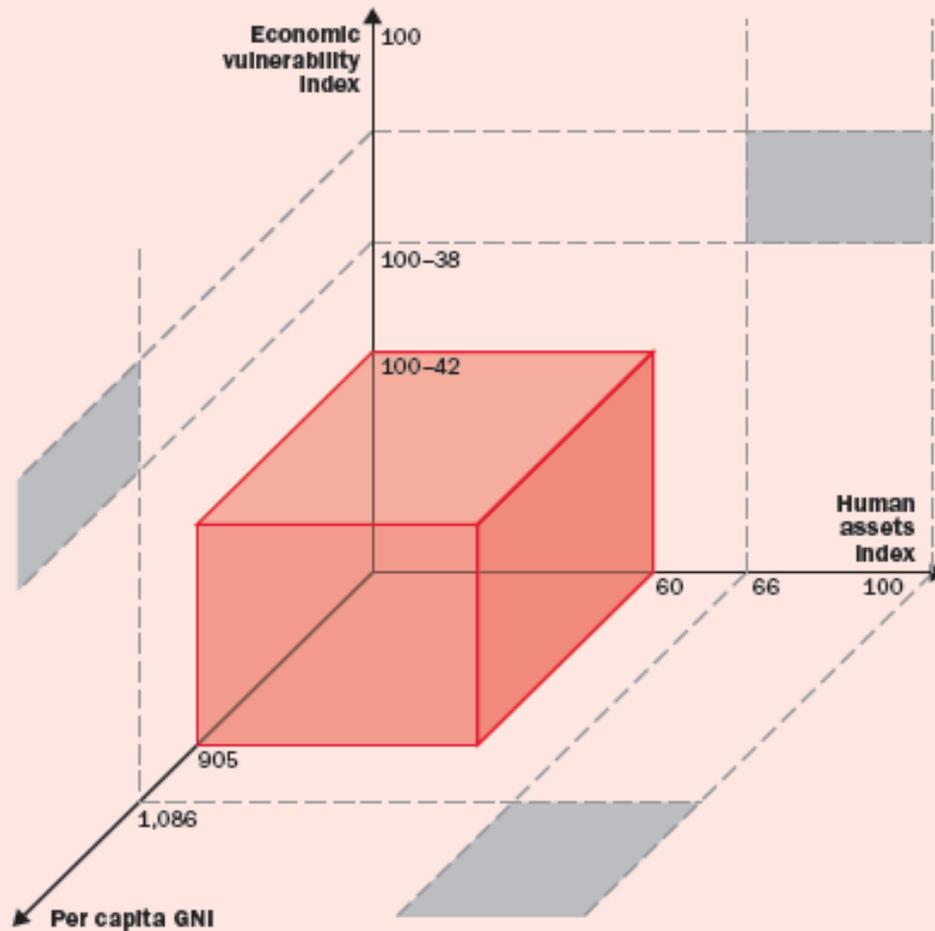
Why has the number of LDCs doubled?

- Inclusion of newly independent countries (14 among the 26 added)

- Deterioration of the situation of other countries previously out of the list

- Very few graduations (Botswana 1994, Cape Verde 2007), as a result of the asymmetry between inclusion and graduation rules, mainly in the number of criteria to be met

- Making the category a « ratchet category »

Has the application of the criteria been consistent over time?

- Due to the asymmetry of graduation and inclusion rules:
- 18 LDCs would no longer be eligible for inclusion, without being eligible to graduation
- 5 other LICs, not eligible to inclusion, would not be eligible to graduation, had they been on the list
- Thus 23 countries are meeting neither inclusion nor graduation criteria (« potentially discordant countries»)
- Normal group, only if reasonable size

What is the size of the discordance?

- *Among LDCs,*
  - no longer be eligible for inclusion, had they not be on the list

  - neither eligible to graduation
- *Among LICs not LDCs,*
  - not be eligible to graduation, had they be on the list
  - if are excluded the 2 eligible for inclusion having refused
- *Finally*
  - discordant countries
  - potentially discordant, ie countries meeting neither inclusion nor graduation criteria

- 14 in 2006   / 21 in 2009

- 11 in 2006   / 18 in 2009

- 10 in 2006   / 7 in 2009

- 8 in 2006   / 5 in 2009

- 24 in 2006   / 28 in 2009

- 19 in 2006   / 23 in 2009

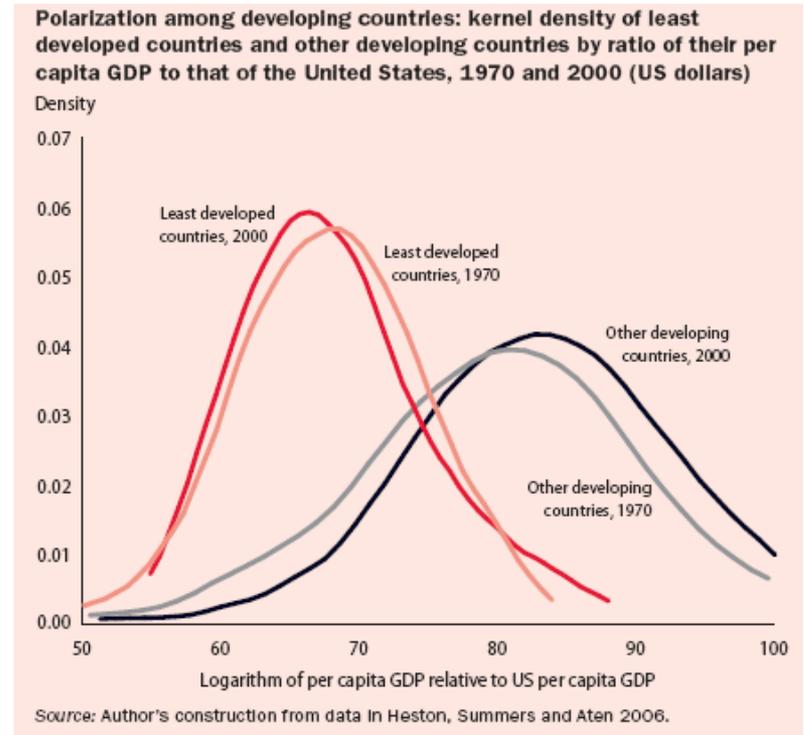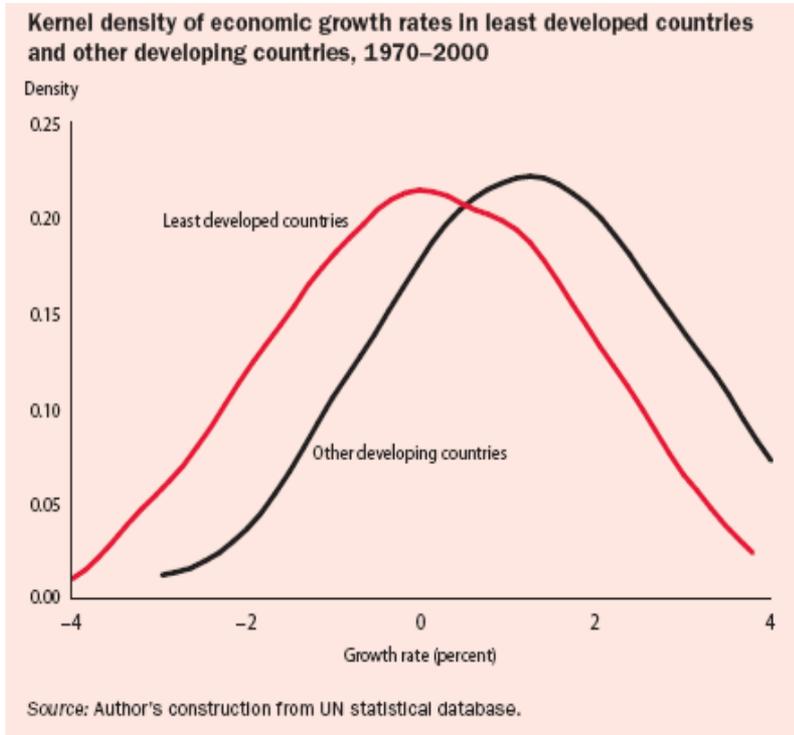# II) Issues related to the rationale of a category

- LDCs and growth economics: why no convergence? The nature of the « trap »
- Since the trap is supposed to result from a lack of human capital and from a high structural economic vulnerability how to measure each of these two handicaps?

The LDC growth lag.
Why no convergence? Why a trap?

- From 1970 to 2000, stagnation of income pc in most LDCs (improvement after 2000, mainly due to oil exporters)

- Widening gap between LDCs and other developing countries: polarization, twin peaks (graphs)

- An exception to absolute convergence

- But convergence conditional on structural handicaps (HAI and EVI), evidencing the relevance of criteria

- Likelihood of a trap due to the *interaction* of low human capital and high structural vulnerability: growth lag explained by this interaction

Two views on the twin peaks

Kernel density of economic growth rates in least developed countries and other developing countries, 1970–2000

Density

Least developed countries

Other developing countries

Growth rate (percent)

Source: Author's construction from UN statistical database.

Polarization among developing countries: kernel density of least developed countries and other developing countries by ratio of their per capita GDP to that of the United States, 1970 and 2000 (US dollars)

Density

Least developed countries, 2000

Least developed countries, 1970

Other developing countries, 2000

Other developing countries, 1970

Logarithm of per capita GDP relative to US per capita GDP

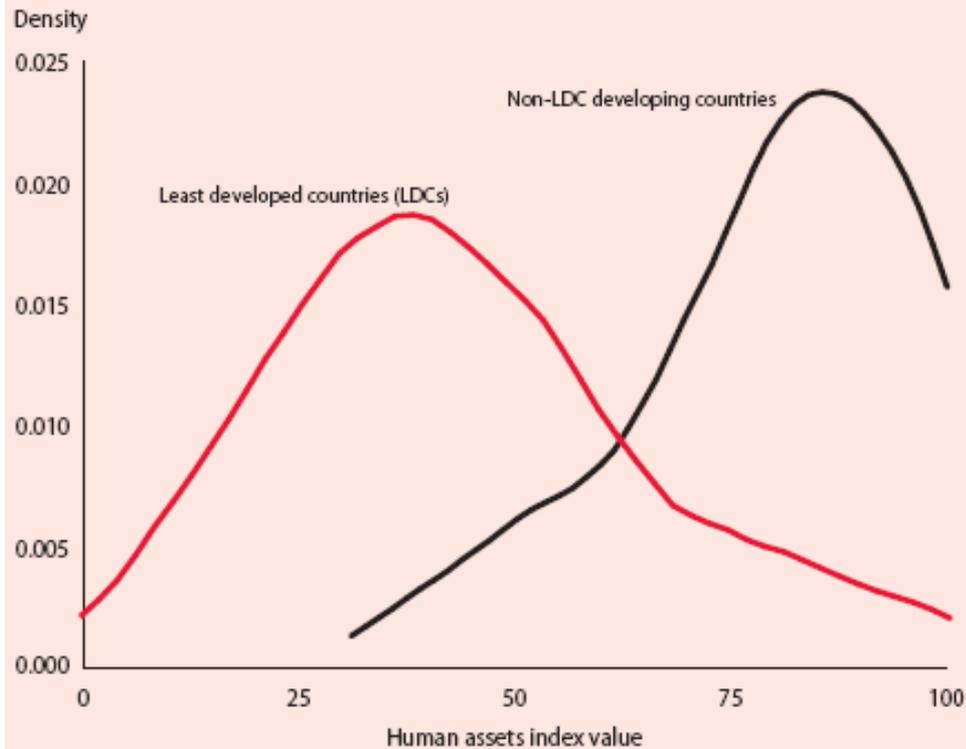Source: Author's construction from data in Heston, Summers and Aten 2006.

The LDC model in brief

- $G(y) = f(y_0,)$ ns: no convergence
- $G(y) = f(y_0, , LDC)$
  two levels of convergence, lower for LDCs
- $G(y) = f(y_0, HAI, EVI, LDC)$
  convergence conditional on HAI & EVI (LDC ns)
- $G(y) = f[\ln y_0, \ln(100-HAI), \ln EVI]$
  augmented conditional convergence: the two structural handicaps not perfectly substitutable
- The (-) elasticity of growth to each handicap rises with the value of the other handicap: *mutual reinforcement of handicaps*

How to measure the human capital gap?

- HAI, Indicator of the quality of human assets, indicator of handicap rather than well-being with 4 components,

  2 health indicators and 2 education indicators:

  1. % of population undernourished
  2. Child mortality rate (survival at 5)
  3. Gross secondary school enrolment ratio
  4. Adult literacy rate

- HAI preferred to other indices (HDI), because it does not include GNIpc, includes nutrition, …

- Refinements limited by the lack of reliable data

The human capital divide

A human capital gap between least developed countries and other developing countries: kernel density of countries according to human assets index values, 2006 review

Density

Non-LDC developing countries

Least developed countries (LDCs)

Human assets index value

Source: Author's construction based on analysis of 2006 human assets index data.
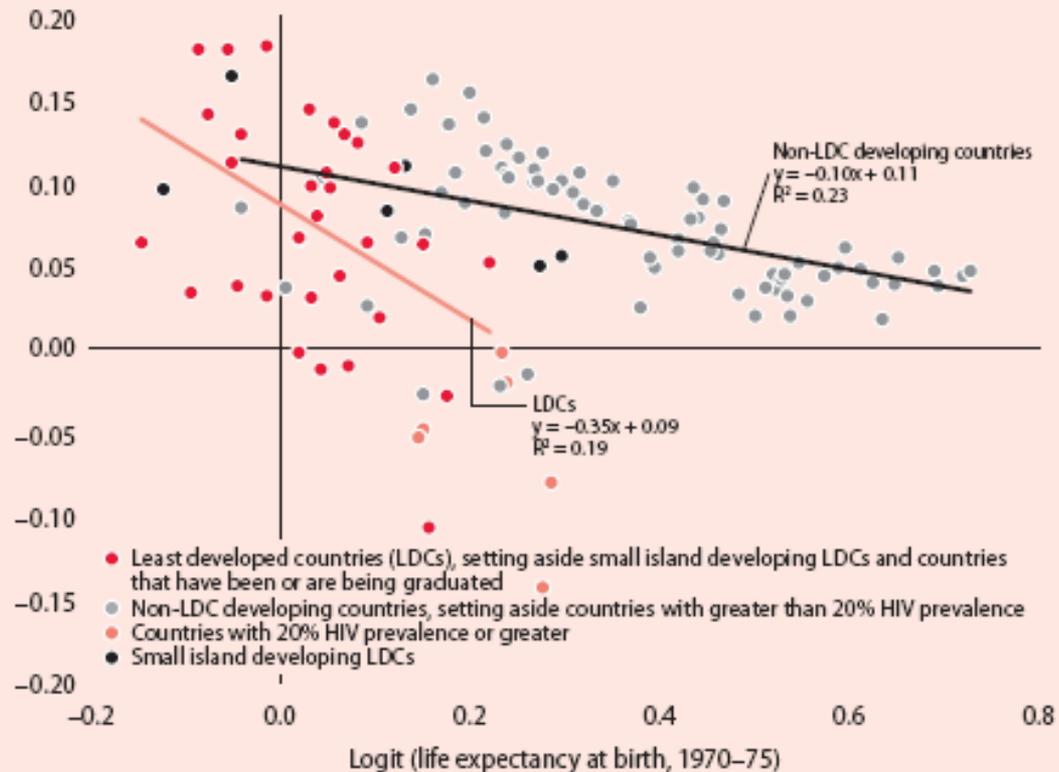
Is there however human convergence?

- Artificial convergence with bounded human indicators, need to use logit variables

- 1970-2006: again, human convergence of LDCs towards a low level.

- Life expectancy at birth: faster convergence for LDCs, still towards a lower level than for other DgC, leading to a basic divergence (graph 5.8)

- Lack of human capital, an underdevelopment trap

Human divergence

Life expectancy at birth: the basic divergence, 1970–75 against 2000–05 (logit model)

Logit (life expectancy at birth, 2000–05) – logit (life expectancy at birth, 1970–75)

Non-LDC developing countries
$y = -0.10x + 0.11$
$R^2 = 0.23$

LDCs
$y = -0.35x + 0.09$
$R^2 = 0.19$

- Least developed countries (LDCs), setting aside small island developing LDCs and countries that have been or are being graduated
- Non-LDC developing countries, setting aside countries with greater than 20% HIV prevalence
- Countries with 20% HIV prevalence or greater
- Small island developing LDCs

Logit (life expectancy at birth, 1970–75)

Source: Author's analysis based on 2006 human assets index data.

How to measure the structural economic vulnerability?

- Progressive move of the CDP to an explicit vulnerability criterion, linked to a growing concern with macro-vulnerability, and with the durable effects of various kinds of instability and chocs on growth and povert

- What kind of vulnerability measurement?
  - Macroeconomic, structural (vs general),
  - measurable (supplemented by vulnerability profiles)
  - taking into account the size of the shocks and the exposure to the shocks (not the resilience, more policy related) by a simple and transparent way

The economic vulnerability index: EVI components

- *Exposure to the shocks*
  - population size
  - remoteness from world markets
  - share of agriculture, forestry, fisheries in GDP
  - export concentration of merchandises
- *Size of the shocks*
  - instability of exports of goods and services
  - instability of agricultural production
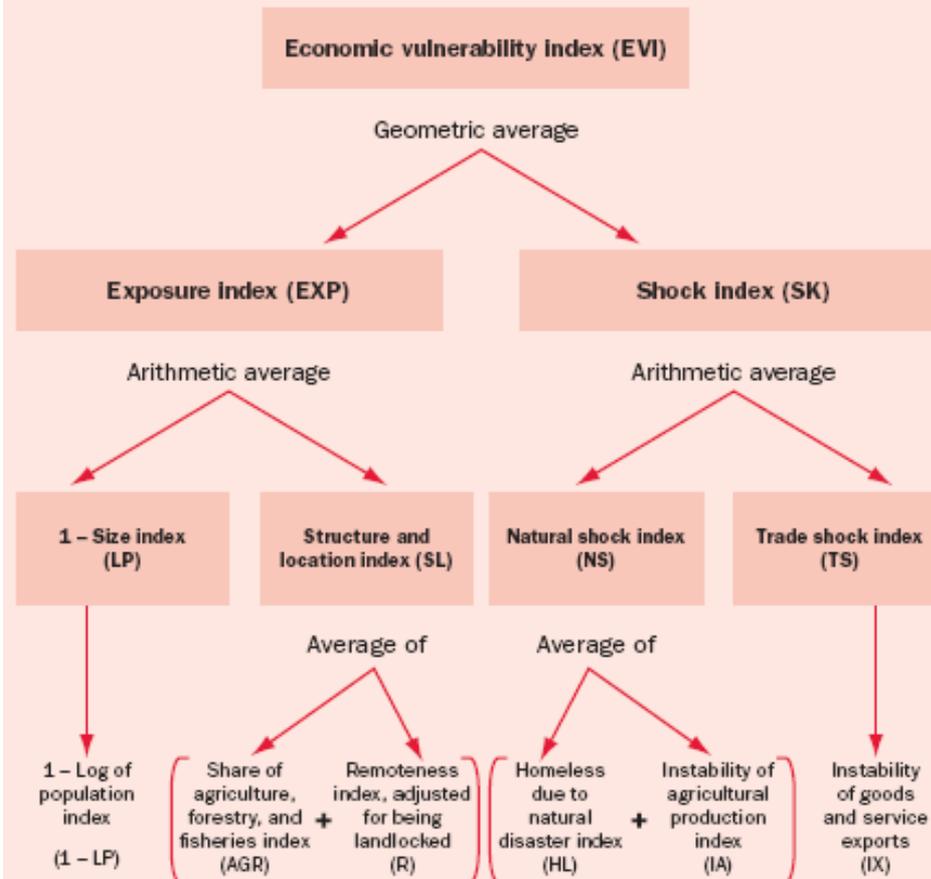 - homelessness due to natural disasters

Economic Vulnerability Index (EVI)
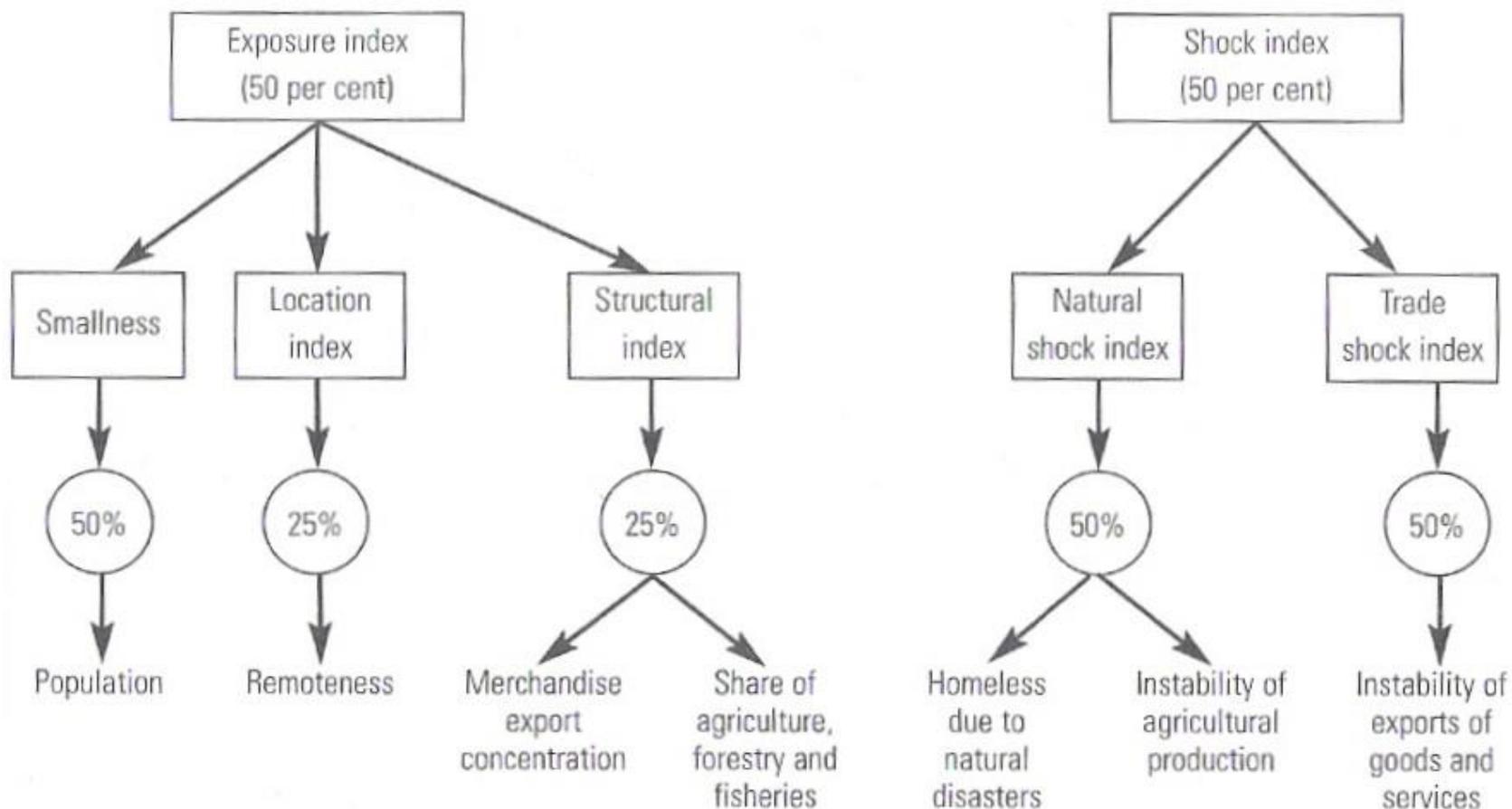
How to improve EVI?

- Reflecting the interaction between shocks and exposure
- Reflecting the increasing marginal impact of vulnerability components
- Possible solutions through averaging:
  - geometric average of (low) shock and exposure indices

  - average of the log indices of components (decomposable index)
- Adding, deleting, redesigning components?
  - Forward vulnerability to climate change preferably assessed through a separate index, and possibly used for other purposes
  - State fragility and risk of conflict also needs a separate analysis

A revised economic vulnerability index with semi-geometric averaging

Economic vulnerability index (EVI)

Geometric average

Exposure index (EXP)   **Shock index (SK)**

Arithmetic average   Arithmetic average

1 – Size index (LP)   **Structure and location index (SL)**   **Natural shock index (NS)**   **Trade shock index (TS)**

Average of   Average of

1 – Log of population index (1 – LP) | Share of agriculture, forestry, and fisheries index (AGR) + Remoteness index, adjusted for being landlocked (R) | Homeless due to natural disaster index (HL) + Instability of agricultural production index (IA) | Instability of goods and service exports (IX)

with EXP = ½ [(1 – LP) + SL] = 0.5 [(1 – LP) + 0.5 (AGR + R)]
and SK = 0.5 [NS + TS] = 0.5 [0.5 (HL + IX) + IX]

The geometric average both reflects the interaction between shocks and exposure and gives a greater impact to whichever of the two shock and exposure indices is higher. This geometric average is:

$$EVI = 1 - \sqrt{(1 - EXP)(1 - SK)}$$

$$EVI = 1 - \underbrace{[0.5 (1 + LP) - 0.25 (AGR + R)]^{0.5}}_{\text{low exposure index}} \cdot \underbrace{[1 - 0.25 (HL + IA) - 0.5IX]^{0.5}}_{\text{low shocks index}}$$

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How vulnerability differs in LDCs?

- EVI higher in LDCs than in other DgC and other LICS

- Smaller decline in LDCs as shown by a »retrospective EVI »

- Broader aspects of vulnerability, also more acute in LDCs:
  - state fragility and past occurrence of conflicts,
  - natural disasters incidence

(III) What options for identifying LDCs in the future?

- Three possible approaches to this issue

- Revising the scope of the category
- Refining the criteria
- Combining the criteria and looking for synthetic indices

What should be the scope of the category?

- Expanding the list ? Loosing international support
- Radically shrinking the list? No
- Maintaining the size of the current list?
- Stability in numbers rather than in membership
- Stability transitory rather than permanent, since the progressive reduction of the number of LDCs is the aim of the category
- « caught in a trap » is the meaning of the category, « out of the trap » is the expected result of the category, examined in the forthcoming volume

Should the criteria be refined?

- GNI pc: desirable changes are not always possible: (moving to PPP estimates ? using genuine income?)

- HAI and EVI: ensuring they adequately reflect the *relative* structural handicaps. For that possible
  - calculation of the thresholds with regard to a large enough reference set of countries

  - aggregation of components to reflect the interaction between health and education for HAI, between shocks and exposure for EVI (proposal of a semi-geometric averaging)

- Need to maintain simplicity, transparency and stability in the criteria. Possible trade-off with refinement.

How to better combine criteria?

- HAI and EVI supplemented or replaced by one *structural handicap index* (SHI), designed with some degree of substitutablity between the two (and with possible symmetry between inclusion and graduation criteria)

- The 3 present criteria aggregated in
  a *least likely to develop index.* 2 methods:
  - averaging the three
  - estimation of a long term « natural expected income » from the present levels of GNIpc, HAI and EVI

- May be used simply as a supplementary information in the identification process

- Would lead to a better consistency of the list

A possible structural handicap index (SHI 2), constructed as the geometric average of a revised human assets index and a revised economic vulnerability index

Sub-components	Component indices	Two (revised) composite indices of structural handicap:	Structural handicap index

Two (revised) composite indices of structural handicap:
- Revised human assets index (HAI)[a]
- Revised economic vulnerability index (EVI)[b]

Literacy rate

Gross secondary school enrolment ratio

Education (E)

Under-five mortality (reverse index)

Calorie intake as a percentage of daily requirements

Health (H)

$$HAI = \sqrt{H \times E}$$

Population size (reverse index)

Remoteness

Share of agricultural value added in GDP (including forestry and fisheries)

Exposure to shocks (X)

$$EVI = \sqrt{(X \times K)}$$

or

Instability in goods and services exports

Instability in agricultural production

Percentage of the population that is displaced by natural disasters

Size of the shocks (K)

$$EVI = 100 - \sqrt{(100 - X)(100 - K)}$$

$$SHI\ 2 = \sqrt{EVI(100 - HAI)}$$

How to enhance the consistency and recognition of the category?

- Clear rationale of the category: countries *more at risk to stay poor* due to the conjunction of low human capital and high structural vulnerability The category not only has logical grounds, but also enlightens some basic reasons of of the growth lag of more than 40 countries

- Recognition easier if consistency enhanced, with some *stability* maintained, and *transparency* insured

- Can result from a refinement of the criteria, along with the improvement of statistical data

- Can also result from a *flexible management* of the criteria allowing some degree of substitutability between them,

- Can finally result from their use for *other purposes* in a more gradual context

(IV) Using the criteria beyond the identification of the LDCs

- LDC category useful, but as such its use involves discontinuity
- Needed for some applications, for instance the access to a special regime, such as EBA
- But in other fields, binary approach not needed: such is aid allocation between countries
- LDCs identification criteria, in particular HAI and EVI, can then be used in a more continuous manner, as already the case for GNIpc, for aid allocation
- LDC identification criteria are also consistent aid allocation criteria likely to lead to a more equitable, effective and transparent allocation

Thank you