

Measuring Inequality of Opportunity in Asia and the Pacific

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*Inter-regional EGM “Placing equality at the centre of Agenda
2030”*

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Measures

- **14 opportunities:** Access to a good or service, which society accepts should be universal.
- **Circumstances:** gender, wealth, mother's education, residence etc.
- **Data sources:** DHS, MICS, Gallup World Poll
- **2 unique methods (classification tree, D-index)**

Ideally: **circumstances**



access to opportunities

Research Questions

Issue #1: Do circumstances matter? Who is left behind?

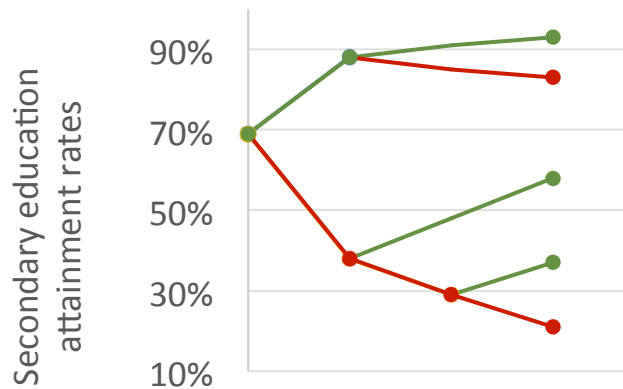
Issue #2: How high is inequality? Which circumstances matter most?

Issue # 1

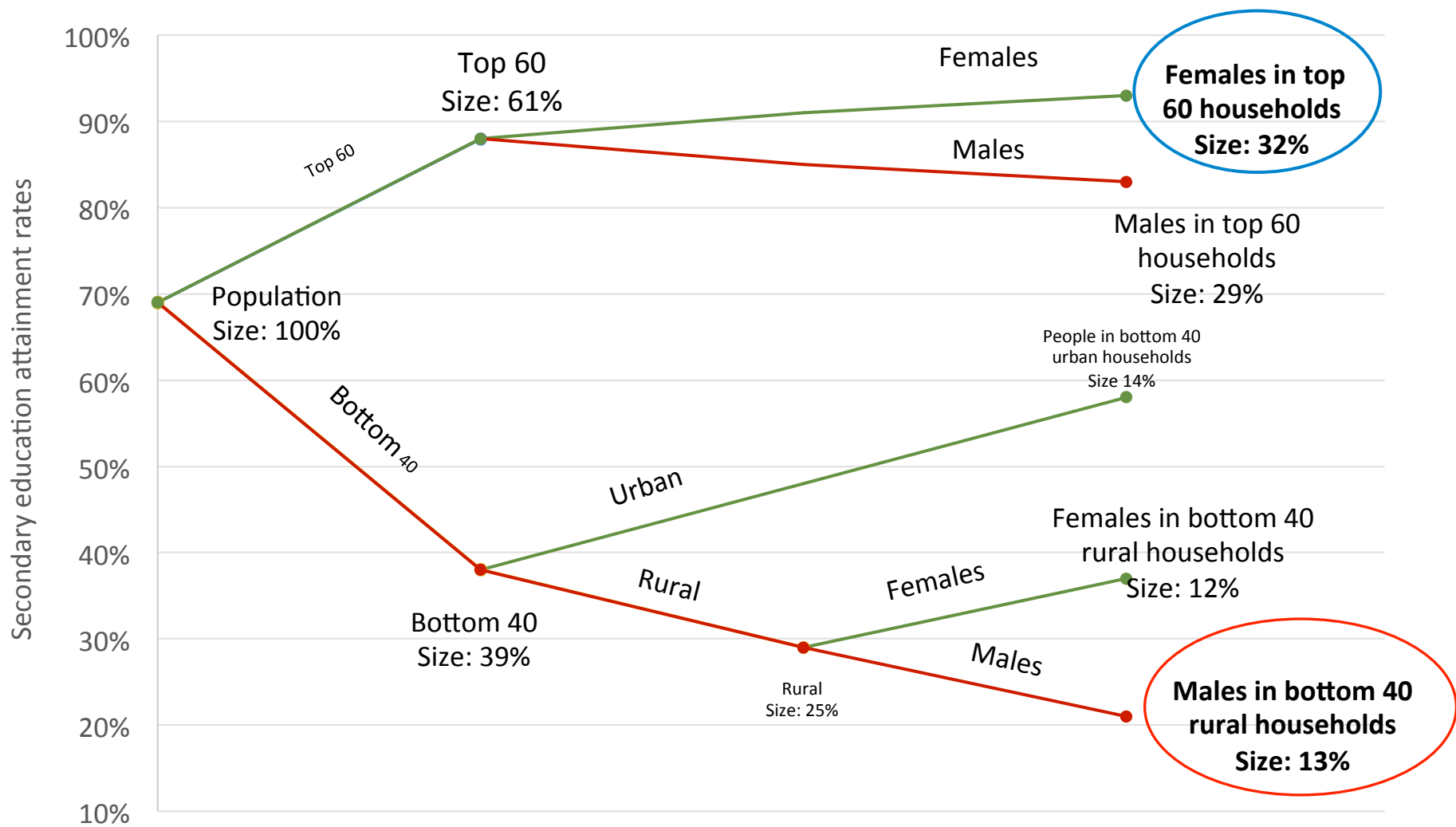
Who is left behind?

Classification Tree

- The classification tree method is an algorithm that estimates the access to an opportunity (e.g. secondary education) by partitioning the sample into different groups based on the circumstances chosen (e.g. gender, residence).

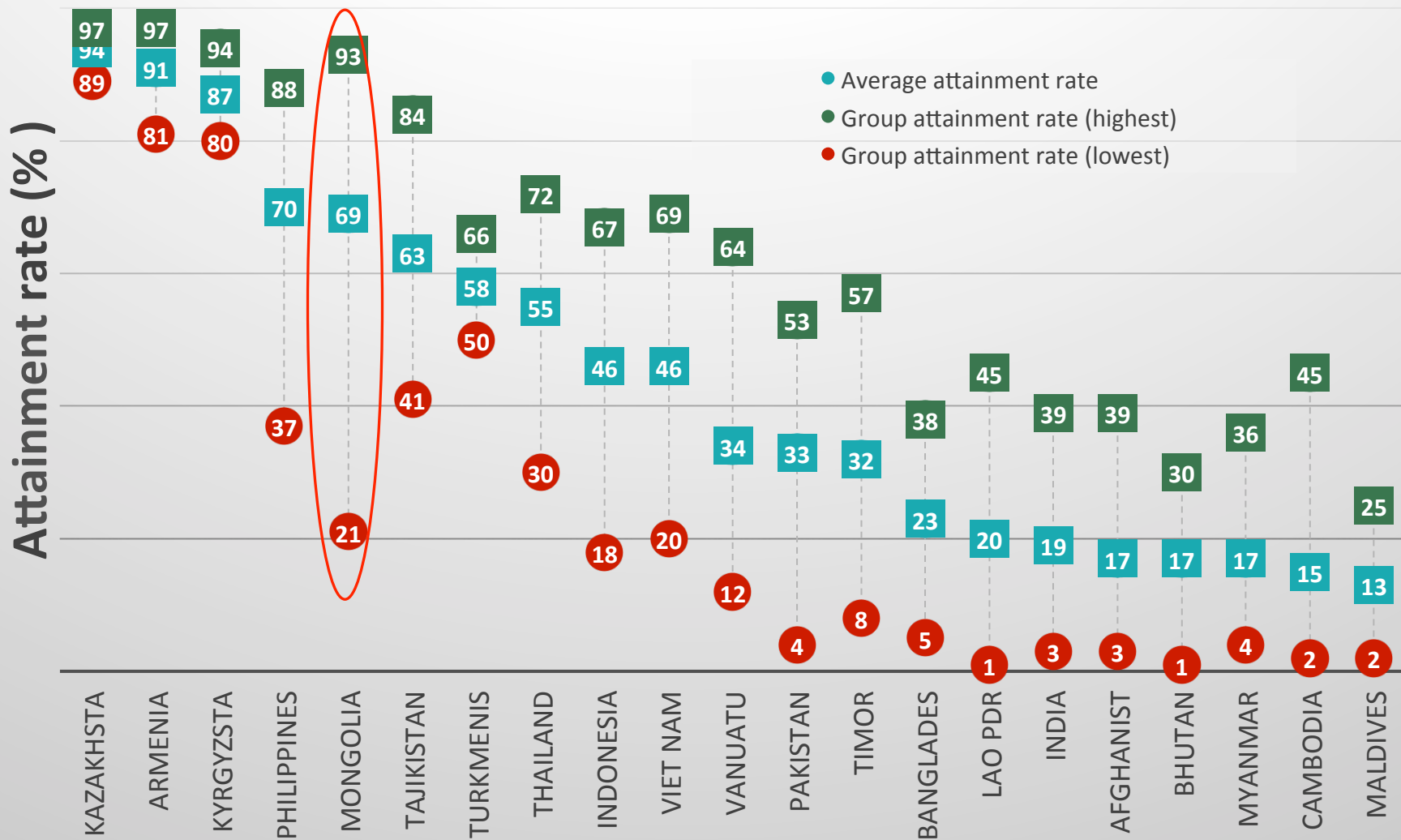


Classification Tree for secondary education attainment in Mongolia



Source: SDD elaboration based on DHS and MICS data, latest year

Gap in Secondary Education Attainment



Source: SDD elaboration based on DHS and MICS data, latest year

Analyzing more than 900 trees....

14 opportunities

x 2 points in time (DHS/ MICS)

x 22 countries in Asia-Pacific

= 616 classification trees

+ 308 trees with ethnicity/ religion



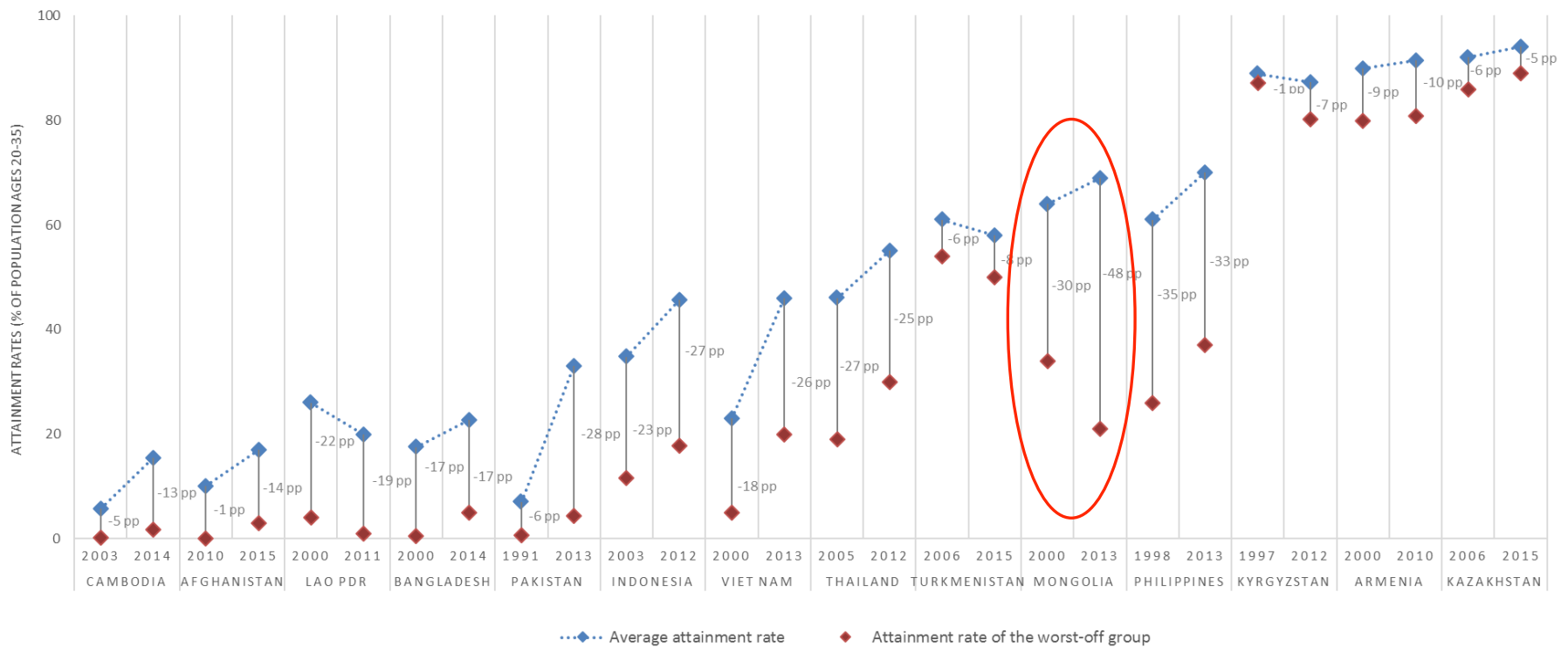
Characteristics of those furthest behind/ahead

FURTHEST BEHIND		FURTHEST AHEAD	
Circumstances	Count (times)	Circumstances	Count (times)
Bottom 40 of wealth distribution	80	Top 60 of wealth distribution	69
Lower and primary education	74	Secondary and higher education	53
Female	63	Male	50
Living in a rural area	42	Living in an urban area	46
Age 15-24	33	Age 25-49	28
Male	16	Female	17
Age 50-64	14	Age 15-24	9

Source: SDD elaboration based on DHS and MICS data, secondary education, latest year

Average progress over time conceals detailed picture

- Secondary education



Source: SDD elaboration based on DHS and MICS data, secondary education, latest year

Issue # 2

How high is inequality?

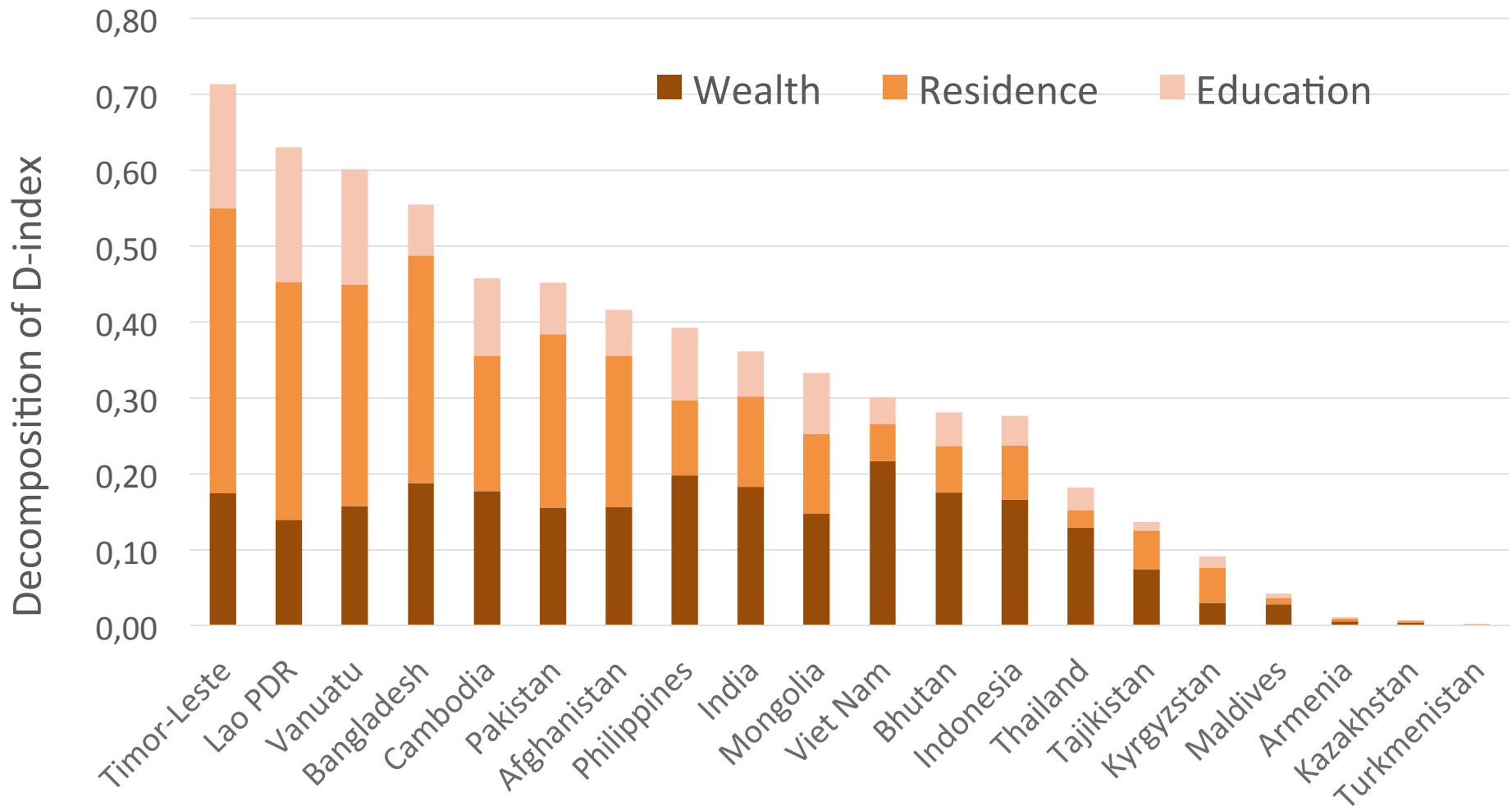
D-index

- The dissimilarity index, or D-index, measures how different groups fare in terms of accessing a certain opportunity

$$D = \frac{1}{2p} \sum_{i=1}^n \beta_i |p_i - p|$$

- The D-index can be decomposed

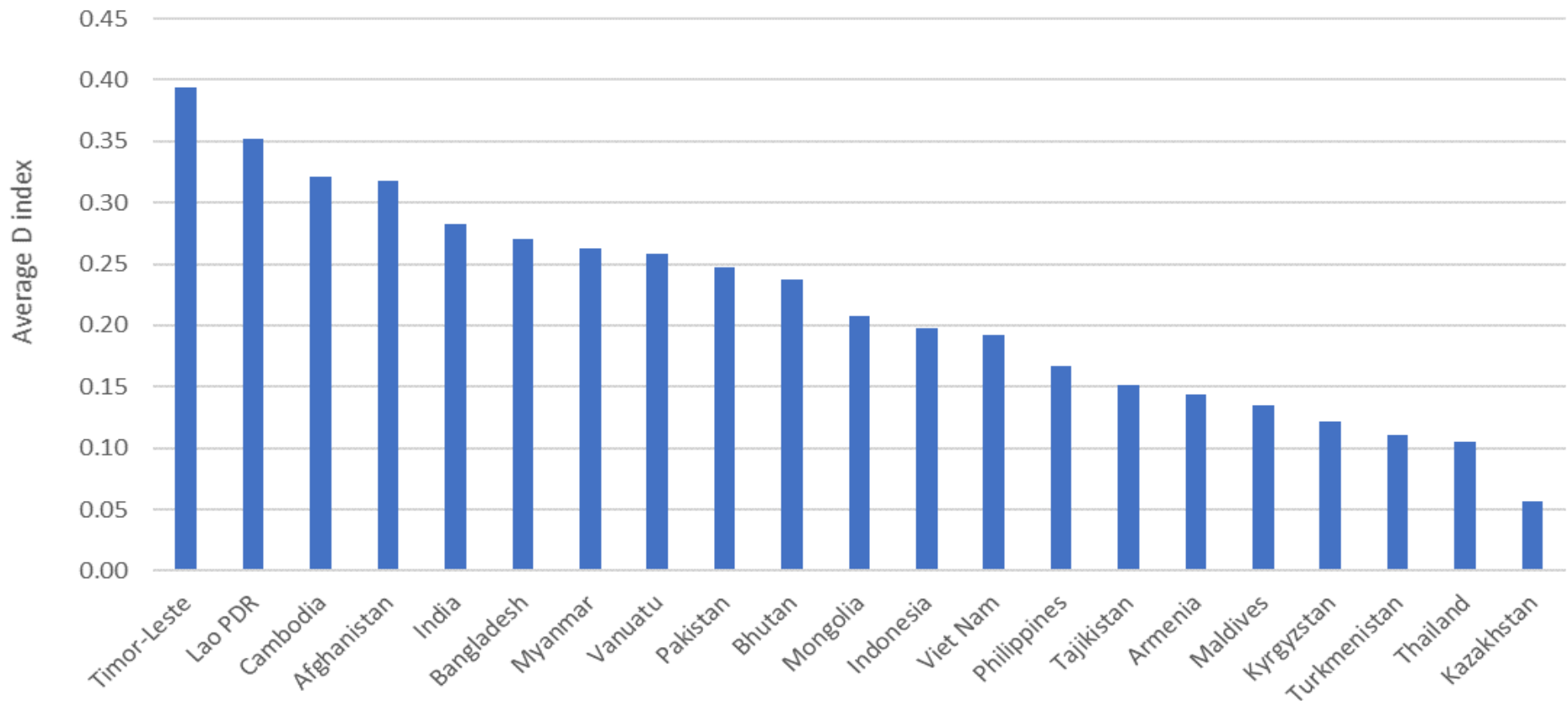
D-index in access to clean fuels



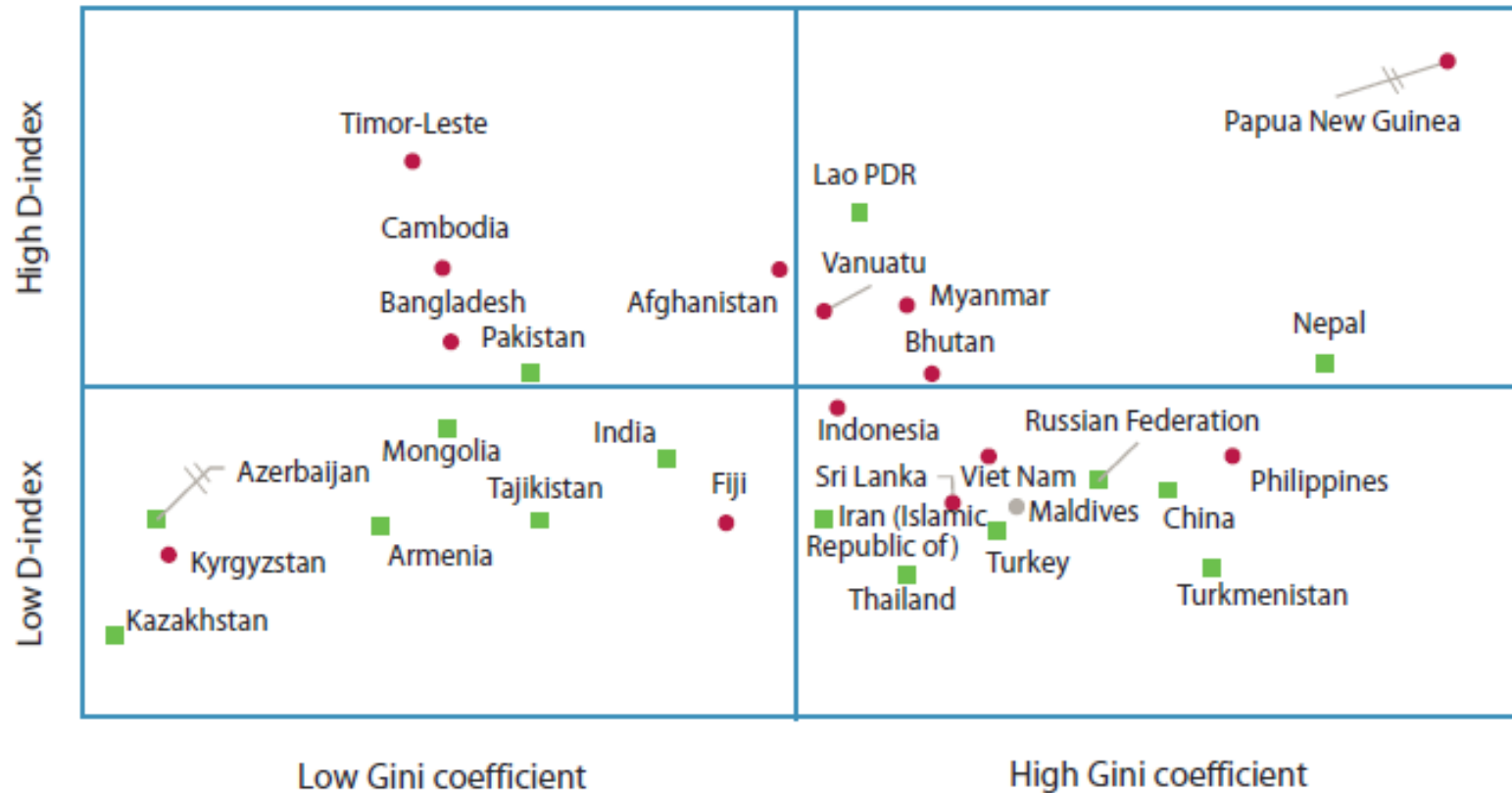
Source: SDD elaboration based on DHS and MICS data, latest year

Average D-index - ESCAP

- Most unequal: sanitation, clean fuels, education & full-time employment
- Most equal: water, electricity, children's nutrition outcomes



Overlapping inequalities



Source: ESCAP (2018). Inequality in Asia and the Pacific in the era of the 2030 Agenda for Sustainable Development
 Note: in red dots are countries with high risk of disaster and in green squares are countries in low risk (World Risk Index)

Policy Options

Better data and
research

Political
commitment

Public support
& trust in
institutions

Multi
ministerial &
stakeholder
collaboration

Strengthen
social
protection

*Reducing inequality
requires...*

Decent work
creation and
labour market
interventions

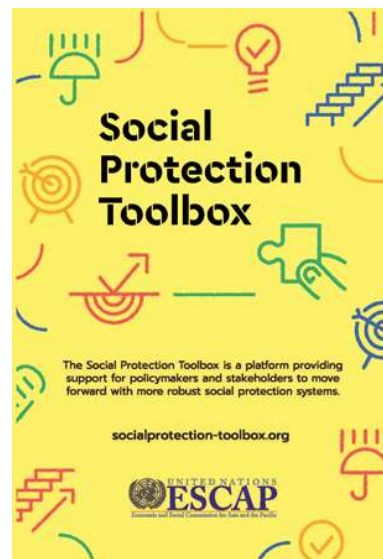
Tax policies

Understanding
the impact
and drivers

Human rights-
based approach

INEQUALITY

in Asia and the Pacific in the era of the 2030 Agenda for Sustainable Development



Thank you!

www.unescap.org/our-work/social-development

www.socialprotection-toolbox.org