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Poverty, Equity, and Growth in Developing
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Taking Progress Seriously: Measuring MDG Progress against Historical Trends

LABEX Meeting Paris, October 9, 2012

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Introduction I: What's Wrong with the MDGs?

- We argue that targets are unrealistic:
  - ▶ Level-end goals (universal primary education, gender parity in education)
  - ▶ Targets defined as relative changes (e.g. two-thirds reduction in child mortality); unrealistic for countries with high initial levels of mortality!
- Unrealistic targets undermine accountability and might trigger aid-fatigue in donor countries.

Introduction II: This Paper

- We propose a new way of assessing progress realistically.
- Helpful in judging progress today, identifying success stories.
- Good way to derive targets for post-2015 MDG framework.

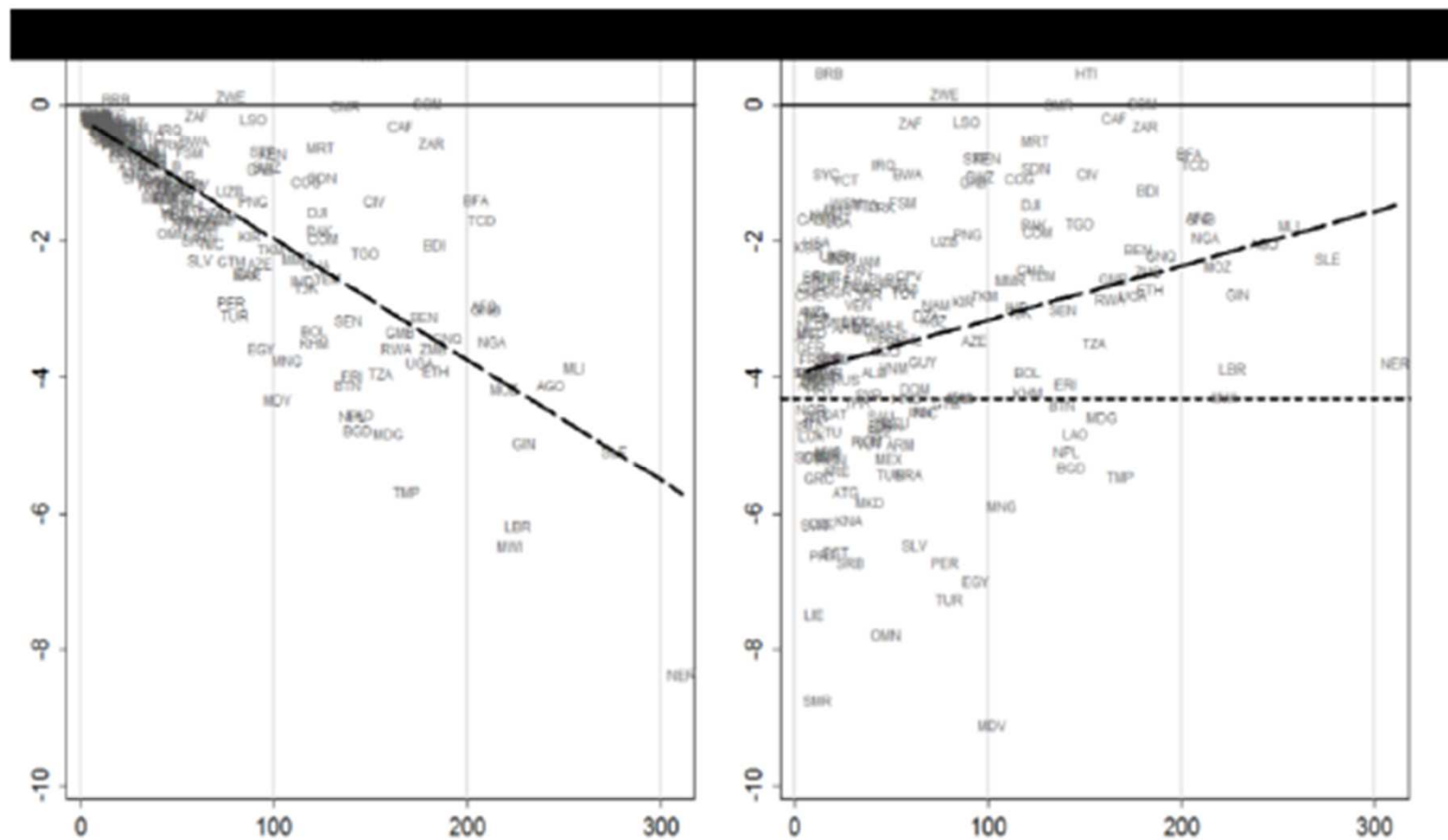# Where Do We Stand on MDG4? Changes in U5MR, 1990-2010

Figure: Abs. and rel. annual changes in U5MR against initial levels, 1990-2010, 192 countries; the horizontal line in the right panel indicates required annual rate of reduction to achieve MDG4 (circa 4.3 percent).

Historical Transition Paths

- Extension of work and ideas by Clemens, Easterly, Lay;

- S-shape of transition path for MDGs 1b, 2, 3, 4, 5 (illustrate it for MDG4)

- Initial improvements difficult, then progress accelerates, before it levels off again;

- Consistent with a model of benefits moving down the income distribution;

- Describes historical pattern of these indicators extremely well;

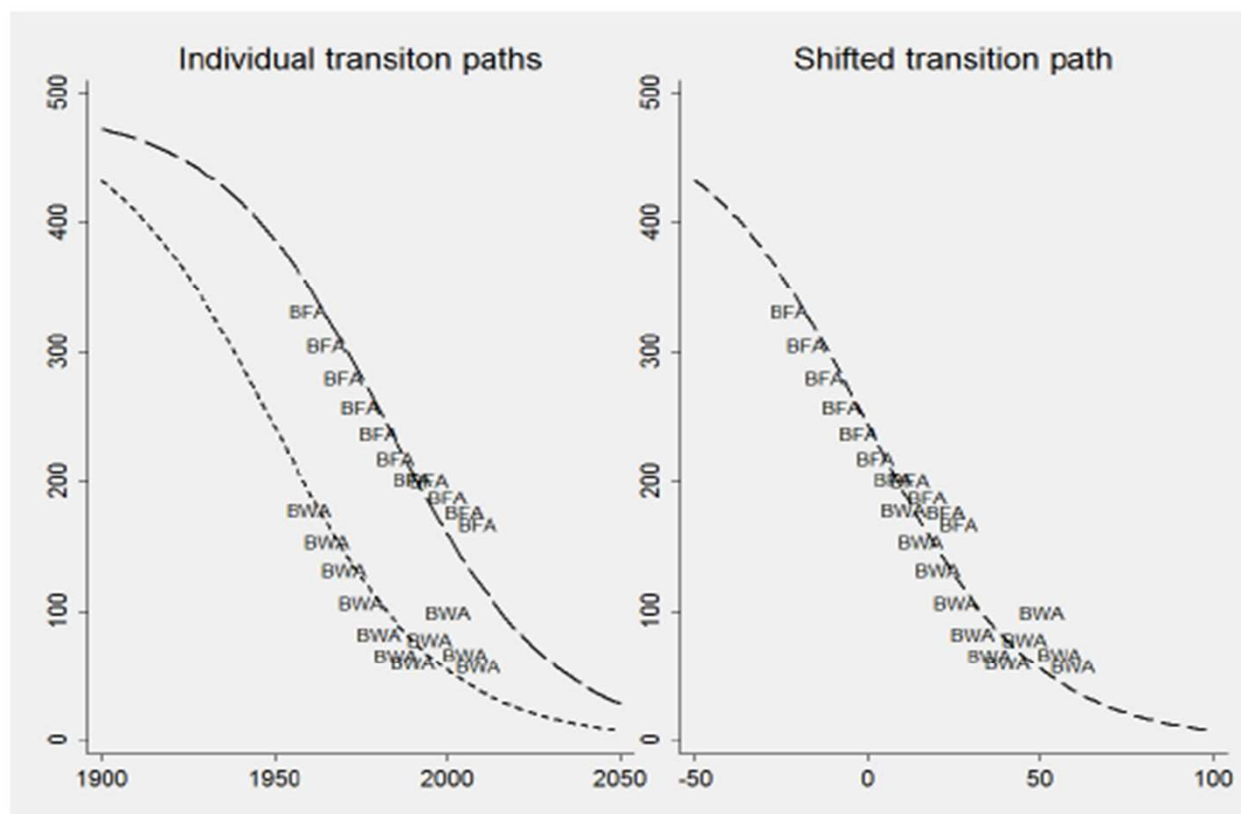# Transition Paths for U5M: Burkina Faso and Botswana

Figure: The left panel shows individual transition paths for BFA and BWA; we then shift observations horizontally so that all individual transition paths pass through 'adjusted year' zero at the point of inflection (right panel).

Transition Path for U5M

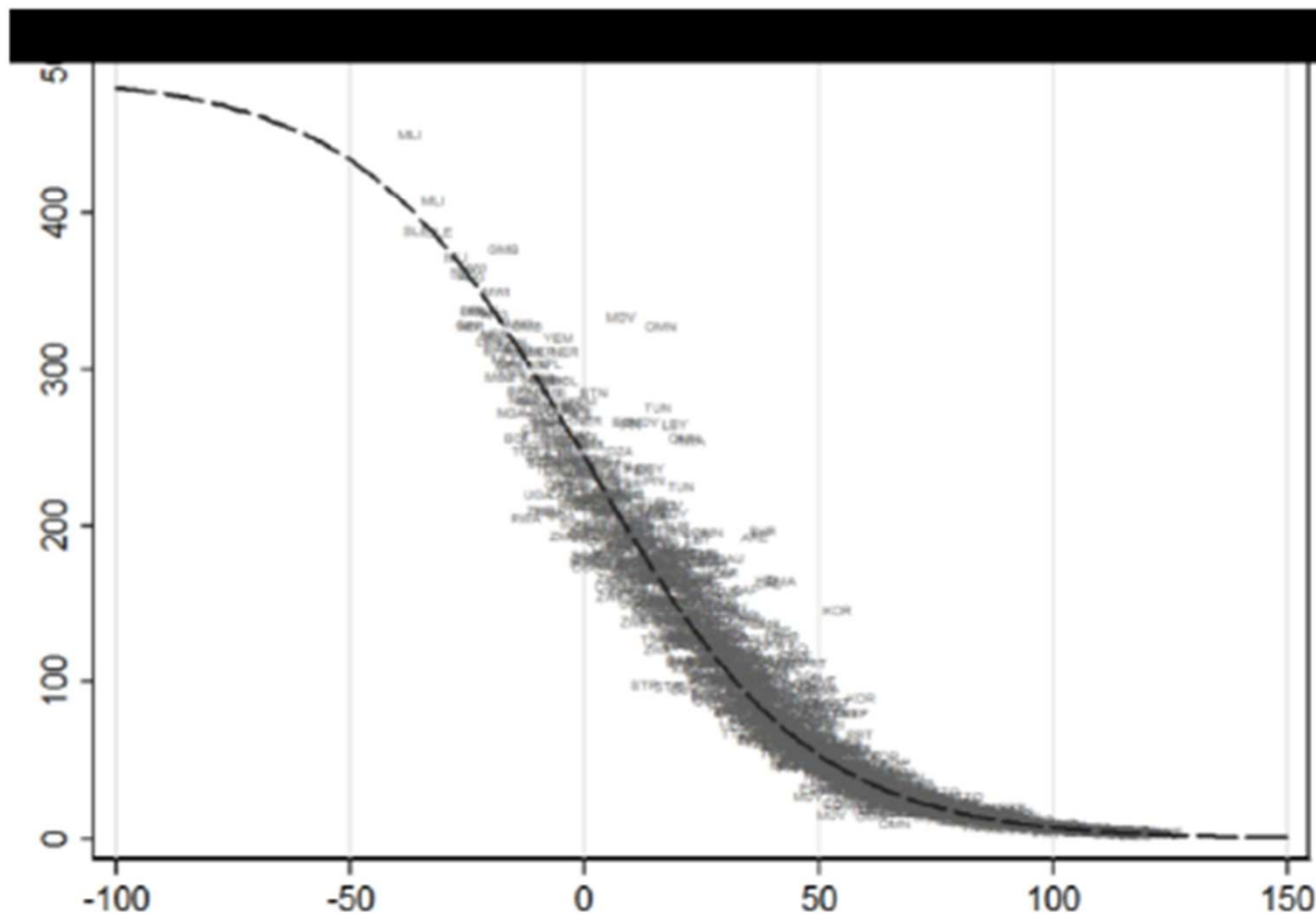Figure: Under-five mortality rates (per 1,000 live births), 1960-2010, against adjusted years and fitted transition path. Based on WDI 2012 data for 192 countries.

Transition Path for U5M

- Development takes time: on average about 40 years to achieve reduction by two-thirds when inital level is 200 per 1,000.

- Changes over time fairly similar: changing the sample (time period and countries) doesn't change results.

Performance Index (PI)

- Construct PI on the basis of transition path:

$$performance\ index = \frac{actual\ change}{projected\ change}$$

- Main advantage: PI will not depend on initial level:

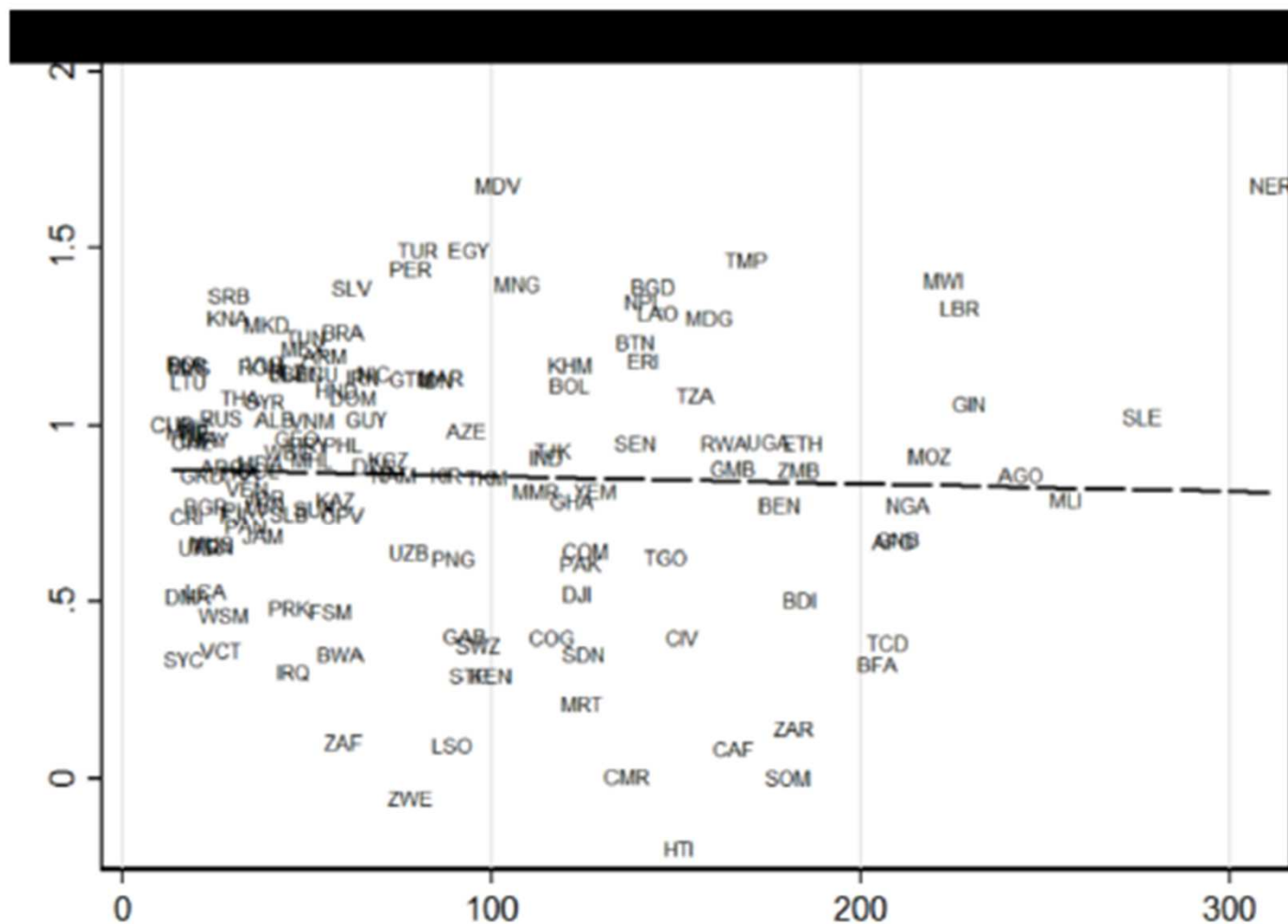# Performance Index Does Not Depend on Initial Levels

Figure: Performance index for under-five mortality rates, 1990-2010, against initial levels, 141 countries (LICs & MICs).

Regional Patterns: MDG4 Performance

Table: Initial levels of under-five mortality, average annual rate of reduction, and performance indices by region, 1990-2009

Region	No.	Initial level 1990	Annual rate of reduction	Performance Index 1990-2009	1990-2000	2000-2009
West & Central Africa	20	152.4	2.0	0.69	0.37	1.00
South & East Africa	27	192.0	1.5	0.59	0.39	0.79
MENA	12	73.9	4.6	1.13	1.16	1.23
South Asia (excl. India)	7	140.0	3.7	1.06	1.06	1.14
India		118.2	3.1	0.94	0.77	1.09
East Asia (excl. China)	11	70.9	3.8	1.02	1.10	0.91
China		45.5	4.5	1.12	0.66	1.60
Oceania	10	75.1	1.6	0.51	0.55	0.39
Latin America	19	49.4	4.6	1.14	1.17	1.18
Caribbean	10	63.5	3.4	0.92	1.01	0.82
Europe & Central Asia	23	40.4	4.3	1.06	0.77	1.36

Notes: Population weights based on 1990 populations.

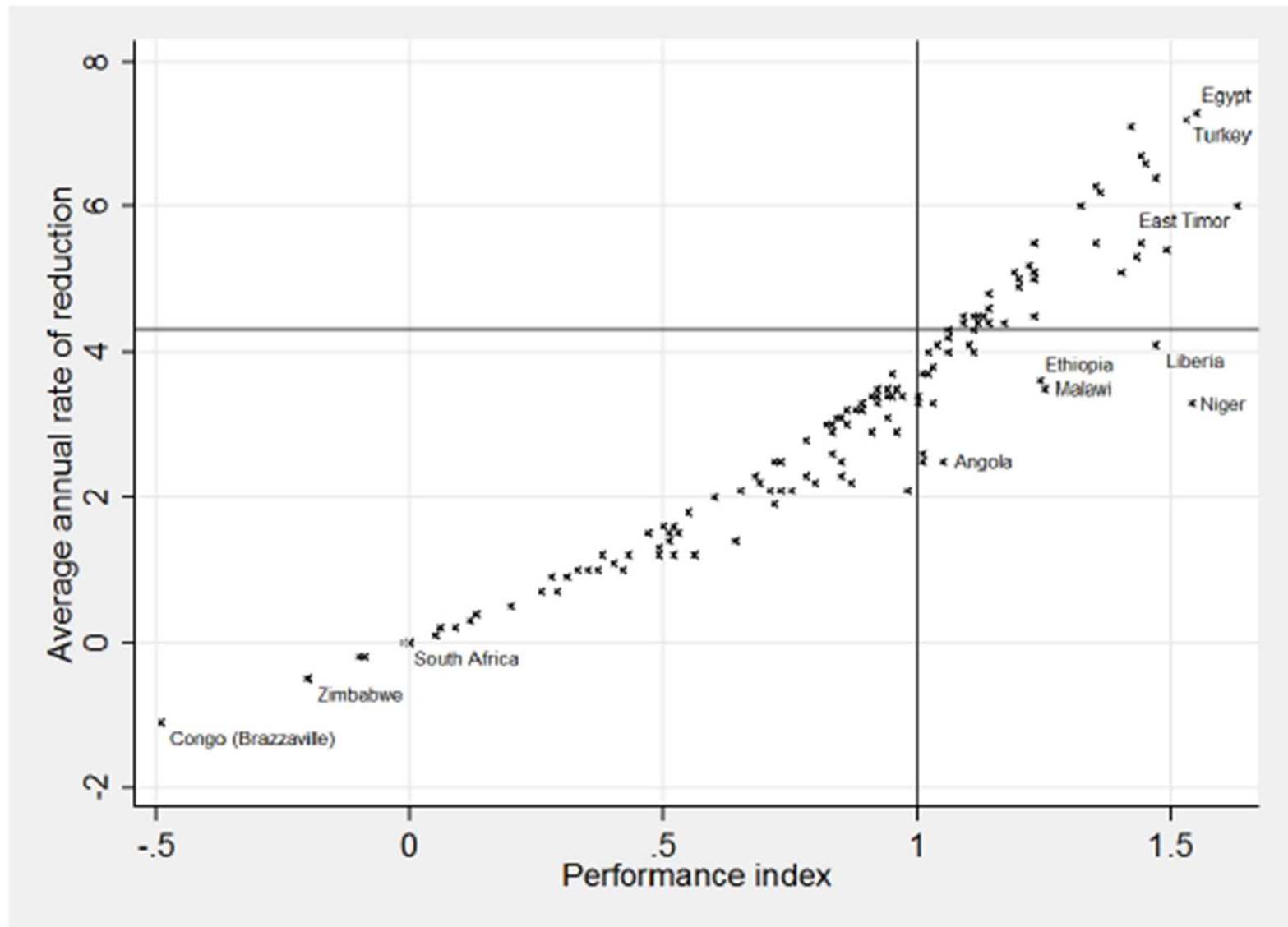# Country Experiences: Misclassified?

Figure: Annual rate of reductions against performance index for under-five mortality rates, 1990-2009, 141 countries.

Table 3: Progress towards MDG2: inital, last, and predicted primary completion rate, MDG progress, and performance index by developing region, c. 1990–2009.

Country	Period	Primary completion rate			On track?	Performance Index
		Initial	Projected	Last		
South & East Africa						
Eritrea	1994–2008	18.0	28.4	46.9	0.63	2.78
Ethiopia	1994–2008	14.9	23.9	52.1	0.78	4.10
Lesotho	1990–2007	58.4	75.4	72.7	0.51	0.84
Madagascar	1990–2008	37.0	56.2	71.2	0.76	1.78
Malawi	1990–2007	28.1	44.7	54.0	0.53	1.56
Mozambique	1990–2008	26.4	43.7	59.4	0.62	1.91
Namibia	1992–2008	74.4	86.7	80.8	0.39	0.52
Rwanda	1992–2008	44.2	61.6	54.0	0.27	0.56
Swaziland	1990–2007	62.7	78.8	72.0	0.37	0.58
Tanzania	1992–2007	55.3	70.9	82.6	1.02	1.76
West & Central Africa						
Benin	1990–2008	19.5	34.1	65.1	0.79	3.12
Burkina Faso	1990–2008	19.3	33.9	38.0	0.32	1.28
Burundi	1990–2008	40.9	60.3	45.2	0.10	0.22
Cameroon	1990–2008	54.2	72.8	72.7	0.56	1.00
Central African Republic	1990–2008	30.4	48.6	35.5	0.10	0.28
Chad	1990–2007	16.3	28.5	30.9	0.26	1.20
Congo	1991–2008	48.4	66.7	53.2	0.14	0.26
Congo (Brazzaville)	1990–2008	58.8	76.6	73.1	0.48	0.80
Cote d'Ivoire	1990–2008	40.1	59.5	47.7	0.18	0.40
Gabon	1992–2003	62.0	73.0	69.5	0.45	0.69
Gambia	1992–2008	45.1	62.4	79.1	0.97	1.96
Ghana	1991–2008	63.7	79.6	82.2	0.75	1.16
Guinea	1990–2008	18.8	33.2	54.7	0.61	2.50
Mali	1991–2008	12.0	21.7	56.8	0.75	4.59
Mauritania	1990–2008	29.1	47.0	64.2	0.69	1.96
Niger	1990–2009	15.8	29.5	40.3	0.38	1.79
Senegal	1990–2008	41.9	61.4	56.3	0.34	0.74
Togo	1990–2007	35.0	52.9	61.3	0.59	1.47

Table 4: Progress towards MDG3: inital, last, and predicted ratio of female to male secondary gross enrolment rates, MDG progress, and performance index by developing region, c. 1990–2009.

Country	Period	Ratio of gross enrolment rates			On track?	Performance Index
		Initial	Projected	Last		
South & East Africa						
Eritrea	1993–2008	0.86	0.95	0.71	−1.86	−1.84
Ethiopia	1991–2008	0.75	0.88	0.72	−0.18	−0.25
Kenya	1985–2008	0.75	0.91	0.92	0.73	1.04
Malawi	1990–2008	0.57	0.74	0.85	0.89	1.66
Mozambique	1990–2008	0.57	0.73	0.75	0.58	1.09
Rwanda	1990–2008	0.71	0.85	0.90	0.91	1.34
Somalia	1985–2007	0.55	0.75	0.46	−0.23	−0.45
Uganda	1990–2008	0.58	0.74	0.85	0.91	1.68
Zimbabwe	1990–2006	0.88	0.96	0.92	0.56	0.52
West & Central Africa						
Benin	1990–2005	0.42	0.56	0.57	0.42	1.04
Burkina Faso	1990–2009	0.52	0.70	0.74	0.61	1.23
Burundi	1990–2008	0.62	0.78	0.71	0.32	0.54
Cameroon	1990–2008	0.69	0.83	0.80	0.50	0.77
Central African Republic	1990–2008	0.40	0.57	0.57	0.40	1.03
Chad	1990–2007	0.22	0.34	0.45	0.43	1.85
Congo	1992–2008	0.48	0.63	0.55	0.21	0.47
Congo (Brazzaville)	1990–2004	0.76	0.86	0.86	0.77	1.00
Cote d'Ivoire	1985–2002	0.43	0.59	0.56	0.32	0.76
Gambia	1990–2008	0.47	0.64	0.94	1.24	2.76
Ghana	1990–2008	0.67	0.82	0.89	0.92	1.46
Guinea	1990–2008	0.34	0.50	0.59	0.52	1.53
Mali	1990–2008	0.49	0.67	0.64	0.40	0.85
Mauritania	1990–2007	0.47	0.63	0.89	1.16	2.58
Niger	1990–2008	0.37	0.54	0.60	0.50	1.37
Nigeria	1990–2007	0.76	0.88	0.77	0.10	0.13
Senegal	1990–2008	0.51	0.68	0.81	0.84	1.75
Sierra Leone	1990–2007	0.49	0.66	0.66	0.49	1.05
Sudan	1991–2009	0.79	0.91	0.88	0.59	0.74
Togo	1990–2007	0.34	0.49	0.53	0.41	1.21

Use Performance Index for Post-MDG World

- Be realistic but ambitious;

- Take account of initial conditions and historical transition paths;

- Proposal: Require performance index of, say, 1.1 or 1.2 (10-20% improvement than historical trends);