

On the 2009 Edition of the IIAG: *Strengths, Challenges and Applications*

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** The work reflects close collaboration and inputs from the overall IIAG's technical team (H. Farhan, N. Ulanof, E. McGrath, A. Quirke, P. Stanig and others). Errors are the author's.*

General Observations on the 2009 Edition of the IIAG: *Top Ten Strengths*

The 2009 Edition of IIAG Index has been much improved. Specifically:

- IIAG much more up to date ('currency'), brings latest period up to 2008
- Draws on broader, more varied and improved sources of data
- Combines official sources, 'rules-based' data, with outcomes based from expert assessments: now the full underlying data set comprises over 100 variables from dozens of different data source providers
- Underlying variables exhibit more variation over time now
- Less data 'missingness' than in the past, particularly in recent years; and appropriate treatment of outliers
- North African countries are also included now: IIAG covers 53 countries
- As a result, this 2009 Edition of the IIAG is the most comprehensive database currently available on governance focused on Africa
- Robustness of Top/Bottom 10 countries in IIAG composite, & of the 4 components more robust than in the past (*more 'balanced' contributions*)
- All these new indices, and the scores of underlying individual variables, are publicly disclosed and available in a revamped website, at www.moibrahimfoundation.org
- Transparency and Precision about Imprecision (*imminently*)

Fleshing out some of the Strengths of the 2009 Edition of the IIAG – and initial Challenges...

- 1. Analysis of robustness: top (10) ranked countries in the IIAG 2008 are performing better in governance than countries lower down**
- 2. Likewise, bottom (10) ranked countries are also apart in terms of the magnitude of their governance challenges**
- 3. But: taking margins of error seriously means that cross-country comparisons need to be made with caution. Precise comparisons when country ranks are similar are not possible (*partic mid-range*).**
- 4. e.g.: Senegal and Malawi are 8 ranks apart in IIAG 2008 composite (17th vs 25th), yet only 3 points separate their scores (56 vs. 53)**
- 5. On Average, the margin of error associated with each country score in current IIAG is roughly +/-6 points**
- 6. Further caution needed in comparisons across time, mainly due to large/meaningful changes in short term are almost inexistent (few exceptions). Further, pending methodological challenges (*min-max*)**
- 7. Data more up to date, but ends in 2007/08 (and some missings)**
- 8. Survey data (from citizens & firms) was not incorporated into IIAG**

2009 Edition of the IIAG: Scores

- **How do countries score in the 2009 Edition of the IIAG?:**
 - **Presenting the latest data period for the IIAG composite and each one of the main 4 components**
 - **Caution and care needs to be exercised in implying precise ranks among countries with close scores**
 - **List of Top 10 countries, as well as of Bottom 10 countries, is quite robust**
 - **The ‘muddle middle’, and margins of error**

IIAG Top Tercile Performance Sample, 2007/08 Period

Rank	Country	IIAG Composite 2007/08	IIAG Safety & Rule of Law 2007/08	IIAG Participation & Human Rights 2007/08	IIAG Sustainable Economic Opportunities 2007/08	IIAG Human Development 2007/08
1	Mauritius	82.8	86.9	80.7	80.4	83.1
2	Cape Verde	78.0	89.9	79.5	68.0	74.4
3	Seychelles	77.1	75.4	70.6	64.5	97.9
4	Botswana	73.5	85.0	72.8	68.3	68.1
5	South Africa	69.4	70.2	76.9	62.0	68.4
6	Namibia	68.8	79.5	72.6	61.7	61.2
7	Ghana	65.9	71.2	75.2	49.6	67.7
8	Tunisia	65.8	62.5	41.1	69.6	89.9
9	Lesotho	61.1	68.9	72.4	50.7	52.5
10	Sao Tome & Principe	60.2	67.5	64.2	42.7	66.4
11	Egypt	60.0	63.0	41.2	62.7	73.2
12	Tanzania	59.2	64.5	67.5	51.4	53.3
13	Madagascar	58.3	63.4	66.6	51.8	51.5
14	Algeria	58.3	55.8	44.4	59.6	73.5
15	Benin	58.2	69.1	66.5	46.9	50.1
16	Morocco	57.8	61.8	35.9	64.5	69.0
17	Senegal	55.9	61.8	61.1	50.0	50.9
18	Zambia	55.3	66.4	59.6	47.7	47.3

IIAG Middle Tercile Performance Sample, 2007/08 Period

Rank	Country	IIAG Composite 2007/08	IIAG Safety & Rule of Law 2007/08	IIAG Participation & Human Rights 2007/08	IIAG Sustainable Economic Opportunities 2007/08	IIAG Human Development 2007/08
19	Gambia	55.1	57.7	49.7	48.4	64.5
20	Mali	54.5	62.3	61.0	49.5	45.2
21	Gabon	53.9	55.1	50.7	46.6	63.1
22	Kenya	53.7	53.2	58.8	50.4	52.3
23	Libya	53.6	52.5	20.3	53.4	88.3
24	Uganda	53.5	56.0	58.0	50.8	49.3
25	Malawi	53.0	65.6	57.9	43.8	44.7
26	Mozambique	52.3	62.4	63.0	46.6	37.4
27	Burkina Faso	51.5	61.8	55.5	46.7	42.2
28	Mauritania	50.5	46.3	56.0	49.9	49.9
29	Swaziland	49.4	63.3	32.4	52.2	49.7
30	Sierra Leone	48.9	52.4	60.1	41.3	41.7
31	Comoros	48.5	59.2	48.5	27.4	59.1
32	Rwanda	48.5	55.5	45.6	47.0	45.8
33	Cameroon	47.0	51.2	39.2	48.3	49.0
34	Niger	46.5	56.3	50.2	43.6	36.1
35	Nigeria	46.4	50.5	41.8	42.6	50.7

IIAG Bottom Tercile Performance Sample 2007/08 Period

Rank	Country	IIAG Composite 2007/08	IIAG Safety & Rule of Law 2007/08	IIAG Participation & Human Rights 2007/08	IIAG Sustainable Economic Opportunities 2007/08	IIAG Human Dev 2007/08
36	Djibouti	46.0	56.0	32.9	41.7	53.4
37	Ethiopia	45.5	49.8	35.2	51.1	46.1
38	Burundi	45.2	48.3	56.5	35.7	40.4
39	Liberia	44.9	45.7	53.9	33.7	46.2
40	Guinea Bissau	43.5	46.9	47.6	32.0	47.3
41	Congo Rep	42.7	44.9	40.6	40.4	45.1
42	Angola	41.0	41.6	43.5	37.0	41.8
43	Togo	40.8	55.2	32.6	30.4	45.0
44	Guinea	40.4	43.7	36.2	36.2	45.3
45	Eq. Guinea	39.3	47.5	19.5	40.6	49.7
46	Eritrea	36.9	45.3	19.8	31.5	51.1
47	Cote d'Ivoire	36.6	37.7	27.8	39.4	41.4
48	CAR	35.0	43.0	40.8	27.9	28.2
49	Sudan	33.4	23.8	21.5	36.8	51.5
50	Congo Dem Rep	33.2	31.4	35.5	29.9	36.0
51	Zimbabwe	31.2	28.9	31.9	20.1	44.0
52	Chad	29.8	35.6	24.9	28.6	30.1
53	Somalia	15.2	9.0	12.5	0.8	38.5
27	Sample Avrge	51.2	55.8	49.3	45.9	53.7

In Comparing Across Countries: *transparent and precise about imprecision*

- **Taking Margins of Error seriously is crucial**
- **Imprecision is common to any indicator or variable in governance & investment climate**
- **The distinctions across indices and variables refer to: i) disclosure and transparency regarding imprecision; ii) estimation of imprecision (or margins of error, or ‘uncertainty’)**
- **We embarked (w/ P. Stanig) in the estimation of 3 different sources of ‘uncertainty’: i) measurement error; ii) data ‘missingness’, and, iii) uncertainty about weights assigned to the 4 components**
- **The first two sources are integrated together (‘M&M’), while the last source (‘weights’) is kept separate**
- **Reviewing IAG composite and 2 of the components...**

Uncertainty in IIAG Composite Top Tercile Performance Sample, 2007/08 Period

Rank	Country	IIAG Composite score, 07/08	Combined M&M SE 08	Bottom 5% M&M CI 07/08	Top 95% M&M CI 07/08
1	Mauritius	82.8	2.22	76.2	87.2
2	Cape Verde	78.0	2.68	71.2	82.4
3	Seychelles	77.1	2.36	72.3	82.5
4	Botswana	73.6	3.09	66.7	80.6
5	South Africa	69.4	3.09	62.3	75.4
6	Namibia	68.8	2.86	61.8	75.2
7	Ghana	66.0	2.50	61.6	71.5
8	Tunisia	65.8	2.71	60.0	71.7
9	Lesotho	61.2	3.10	55.0	68.4
10	Sao Tome & Principe	60.2	3.15	53.4	66.6
11	Egypt	60.1	2.72	55.1	65.3
12	Tanzania	59.2	2.55	54.8	64.1
13	Madagascar	58.4	2.58	52.6	63.2
14	Algeria	58.4	2.64	52.1	63.7
15	Benin	58.2	3.02	50.4	64.7
16	Morocco	57.8	2.93	50.9	63.5
17	Senegal	56.0	2.70	49.6	61.7
18	Zambia	55.3	2.17	50.6	59.7

**M&M stands for Measurement and Missing Variable Uncertainty. SE: Standard Error CI: Confidence Interval*

Uncertainty in IAG Composite Middle Tercile Performance Sample, 2007/08 Period

Rank	Country	IAG Composite score, 07/08	Combined M&M SE 08	Bottom 5% M&M CI 07/08	Top 95% M&M CI 07/08
19	Gambia	55.1	3.55	46.3	61.0
20	Mali	54.5	2.54	49.4	60.6
21	Gabon	53.9	2.93	45.9	61.0
22	Kenya	53.7	3.17	48.2	61.0
23	Libya	53.7	3.19	47.8	60.2
24	Uganda	53.6	2.77	47.3	60.7
25	Malawi	53.0	2.71	46.7	58.1
26	Mozambique	52.4	2.21	47.6	56.8
27	Burkina Faso	51.6	2.83	45.8	57.3
28	Mauritania	50.6	2.87	45.1	57.2
29	Swaziland	49.4	3.82	42.3	57.5
30	Sierra Leone	48.9	2.71	44.4	54.0
31	Comoros	48.6	3.59	40.8	56.0
32	Rwanda	48.5	2.55	43.5	53.7
33	Cameroon	47.0	2.15	43.1	51.1
34	Niger	46.6	2.96	41.4	52.1
35	Nigeria	46.5	2.86	39.6	51.0

Uncertainty in IIAG Composite Bottom Tercile Performance

Sample 2007/08 Period

Rank	Country	IIAG Composite score, 07/08	Combined M&M SE 08	Bottom 5% M&M CI 07/08	Top 95% M&M CI 07/08
36	Djibouti	46.0	3.58	38.7	55.7
37	Ethiopia	45.6	3.24	40.0	52.0
38	Burundi	45.3	2.25	41.8	50.7
39	Liberia	44.9	3.25	39.6	52.2
40	Guinea-Bissau	43.5	3.41	36.4	50.9
41	Congo, Rep	42.8	2.86	37.7	47.6
42	Angola	41.0	3.31	35.6	47.4
43	Togo	40.8	2.39	35.9	46.1
44	Guinea	40.4	2.81	34.8	46.0
45	Equatorial Guinea	39.4	3.77	32.4	48.1
46	Eritrea	37.0	3.04	32.0	43.5
47	Cote d'Ivoire	36.6	2.52	32.4	42.5
48	Central African Rep	35.0	2.96	30.5	43.3
49	Sudan	33.4	2.86	30.1	40.3
50	Congo, Dem Rep	33.2	2.36	29.1	39.4
51	Zimbabwe	31.3	2.85	27.6	39.8
52	Chad	29.9	2.89	23.9	36.6
53	Somalia	15.2	4.50	8.3	24.0
27	Whole Sample Average	51.2	2.9	45.4	57.4

Uncertainty in IIAG Safety & Rule of Law Top Tercile Performance Sample, 2007/08 Period

Rank	Country	Safety & Rule of Law Score, 07/08	Combined M&M SE 08	Bottom 5% M&M CI 07/08	Top 95% M&M CI 07/08
1	Cape Verde	89.9	2.72	84.8	94.6
2	Mauritius	87.0	2.48	82.5	91.1
3	Botswana	85.0	3.93	77.6	91.6
4	Namibia	79.5	3.25	70.7	85.9
5	Seychelles	75.5	5.40	60.8	84.6
6	Ghana	71.3	3.13	65.6	76.7
7	South Africa	70.3	3.32	61.2	77.4
8	Benin	69.2	3.66	62.7	75.9
9	Lesotho	68.9	3.69	62.2	75.4
10	Sao Tome and Principe	67.5	4.79	57.5	77.6
11	Zambia	66.5	2.10	62.8	70.3
12	Malawi	65.6	2.44	61.4	69.9
13	Tanzania	64.6	3.58	58.4	71.0
14	Madagascar	63.4	3.78	57.1	70.3
15	Swaziland	63.3	4.72	54.9	71.8
16	Egypt	63.1	4.47	55.4	71.2
17	Tunisia	62.5	4.56	54.5	70.4
18	Mozambique	62.5	3.54	56.4	68.9

* *M&M stands for Measurement and Missing Variable Uncertainty. SE: Standard Error CI: Confidence Interval

Uncertainty in IIAG Safety & Rule of Law Middle Tercile Performance Sample, 2007/08 Period

Rank	Country	Safety & Rule of Law Score, 07/08	Combined M&M SE 08	Bottom 5% M&M CI 07/08	Top 95% M&M CI 07/08
19	Mali	62.4	3.89	55.4	69.2
20	Burkina Faso	61.9	4.91	53.2	70.7
21	Senegal	61.8	3.59	55.6	68.1
22	Morocco	61.8	3.98	54.8	68.9
23	Comoros	59.2	5.67	49.2	69.5
24	Gambia	57.7	6.25	47.0	69.2
25	Niger	56.4	4.80	47.7	64.4
26	Uganda	56.0	3.82	53.5	66.7
27	Djibouti	56.0	6.12	45.9	67.4
28	Algeria	55.9	4.06	48.4	63.8
29	Rwanda	55.5	4.30	48.7	63.8
30	Togo	55.3	3.78	48.4	62.8
31	Gabon	55.1	4.97	46.4	64.1
32	Kenya	53.3	3.99	47.8	61.6
33	Libya	52.6	6.03	42.4	63.3
34	Sierra Leone	52.4	4.10	45.1	59.7
35	Cameroon	51.3	3.77	44.8	58.3

Uncertainty in IIAG Safety & Rule of Law Bottom Tercile Performance Sample, 2007/08 Period

Rank	Country	Safety & Rule of Law Score, 07/08	Combined M&M SE 08	Bottom 5% M&M CI 07/08	Top 95% M&M CI 07/08
36	Nigeria	50.6	6.42	39.7	62.1
37	Ethiopia	49.9	5.20	41.1	59.5
38	Burundi	48.4	3.39	45.6	57.5
39	Equatorial Guinea	47.6	5.84	35.5	59.7
40	Guinea-Bissau	46.9	5.42	37.9	56.8
41	Mauritania	46.3	5.38	37.8	56.8
42	Liberia	45.7	3.61	41.0	53.7
43	Eritrea	45.3	7.23	35.5	61.7
44	Congo, Rep	44.9	4.93	36.8	54.6
45	Guinea	43.7	5.20	35.0	52.9
46	Central African Rep	43.0	6.62	34.1	59.2
47	Angola	41.6	5.41	33.2	52.3
48	Cote d'Ivoire	37.7	5.19	29.8	48.3
49	Chad	35.6	5.84	26.5	47.0
50	Congo, Dem Rep	31.4	4.60	25.1	41.1
51	Zimbabwe	28.9	5.46	25.7	44.7
52	Sudan	23.8	4.88	20.9	37.9
53	Somalia	9.1	3.22	6.6	18.0
27	Whole Sample Average	55.9	4.5	48.5	64.7

Uncertainty in IIAG Human Development Top Tercile Performance Sample, 2007/08 Period

Rank	Country	Human Development Score, 07/08	Combined M&M SE 08	Bottom 5% M&M CI 07/08	Top 95% M&M CI 07/08
1	Seychelles	97.9	0.89	96.8	99.8
2	Tunisia	89.9	5.84	72.5	105.7
3	Libya	88.3	4.84	79.5	96.1
4	Mauritius	83.2	6.07	62.0	92.8
5	Cape Verde	74.5	7.99	52.5	85.8
6	Algeria	73.5	6.85	52.3	89.1
7	Egypt	73.3	5.97	60.6	84.8
8	Morocco	69.1	7.94	44.4	85.2
9	South Africa	68.4	8.90	43.5	84.9
10	Botswana	68.2	8.96	47.5	89.5
11	Ghana	67.7	7.01	49.2	82.0
12	Sao Tome	66.5	8.20	48.3	83.3
13	Gambia	64.6	10.93	33.9	80.4
14	Gabon	63.1	8.15	37.8	82.3
15	Namibia	61.3	8.22	38.4	79.1
16	Comoros	59.1	10.67	34.5	82.0
17	Djibouti	53.5	11.71	29.1	87.1
18	Tanzania	53.4	7.48	40.1	67.0

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**M&M stands for Measurement and Missing Variable Uncertainty. SE: Standard Error CI: Confidence Interval*

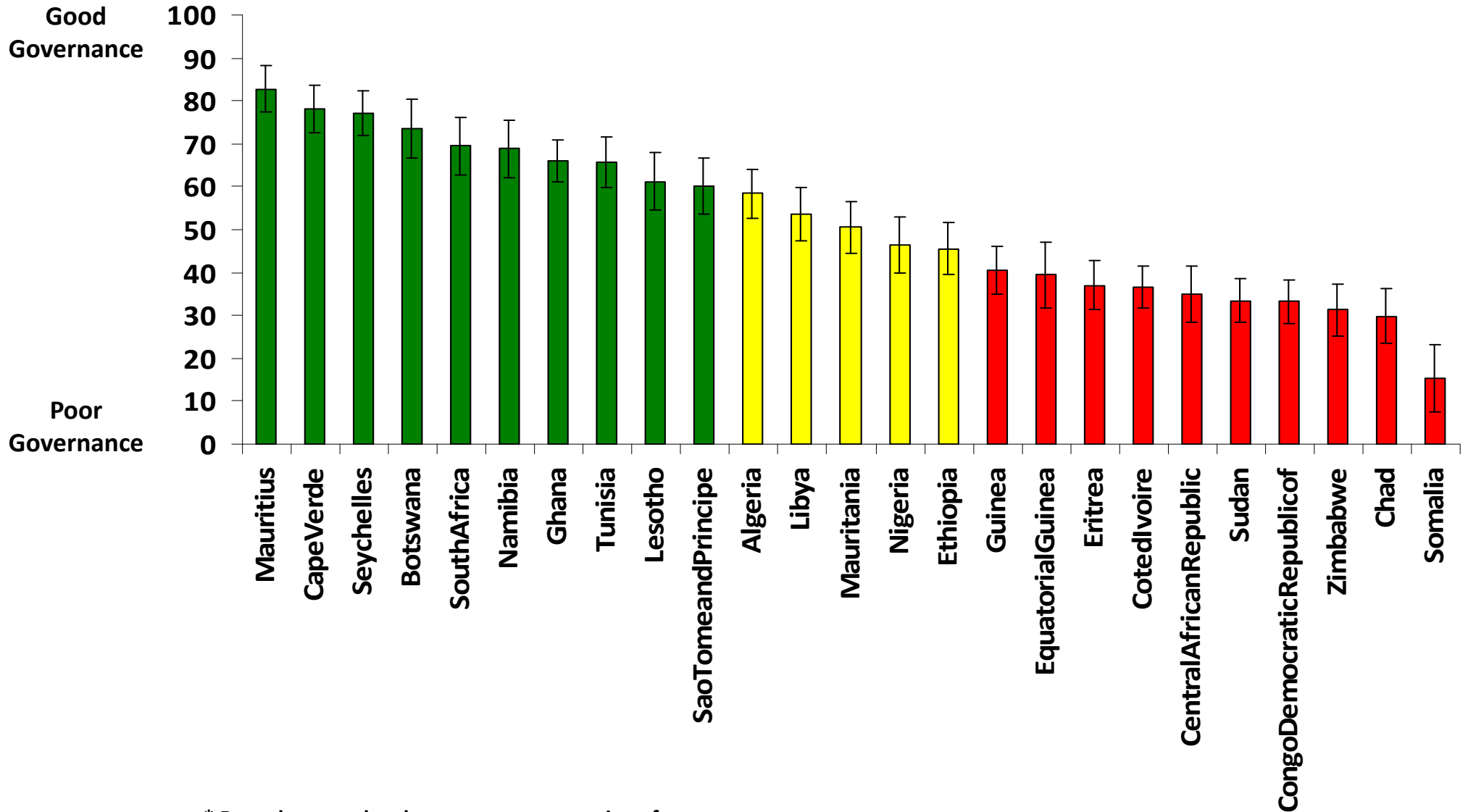
Uncertainty in IIAG Human Development Middle Tercile Performance Sample, 2007/08 Period

Rank	Country	Human Development Score, 07/08	Combined M&M SD 08	Bottom 5% M&M CI 07/08	Top 95% M&M CI 07/08
19	Lesotho	52.6	9.60	31.5	75.4
20	Kenya	52.3	9.33	34.3	73.8
21	Madagascar	51.5	7.09	33.1	63.2
22	Sudan	51.5	8.85	36.6	67.2
23	Eritrea	51.2	8.47	32.8	66.7
24	Senegal	50.9	7.99	29.1	68.1
25	Nigeria	50.8	7.18	34.3	66.1
26	Benin	50.2	9.62	22.5	70.7
27	Mauritania	49.9	6.40	33.8	61.4
28	Equatorial Guinea	49.8	12.43	25.5	80.0
29	Swaziland	49.8	13.14	24.5	79.5
30	Uganda	49.3	8.11	24.3	66.2
31	Cameroon	49.1	5.76	36.4	59.1
32	Guinea-Bissau	47.4	10.72	19.9	72.3
33	Zambia	47.3	6.64	31.4	59.0
34	Liberia	46.3	10.68	27.9	65.5
35	Ethiopia	46.1	9.55	26.2	63.4

Uncertainty in IIAG Human Development Bottom Tercile Performance Sample 2007/08 Period

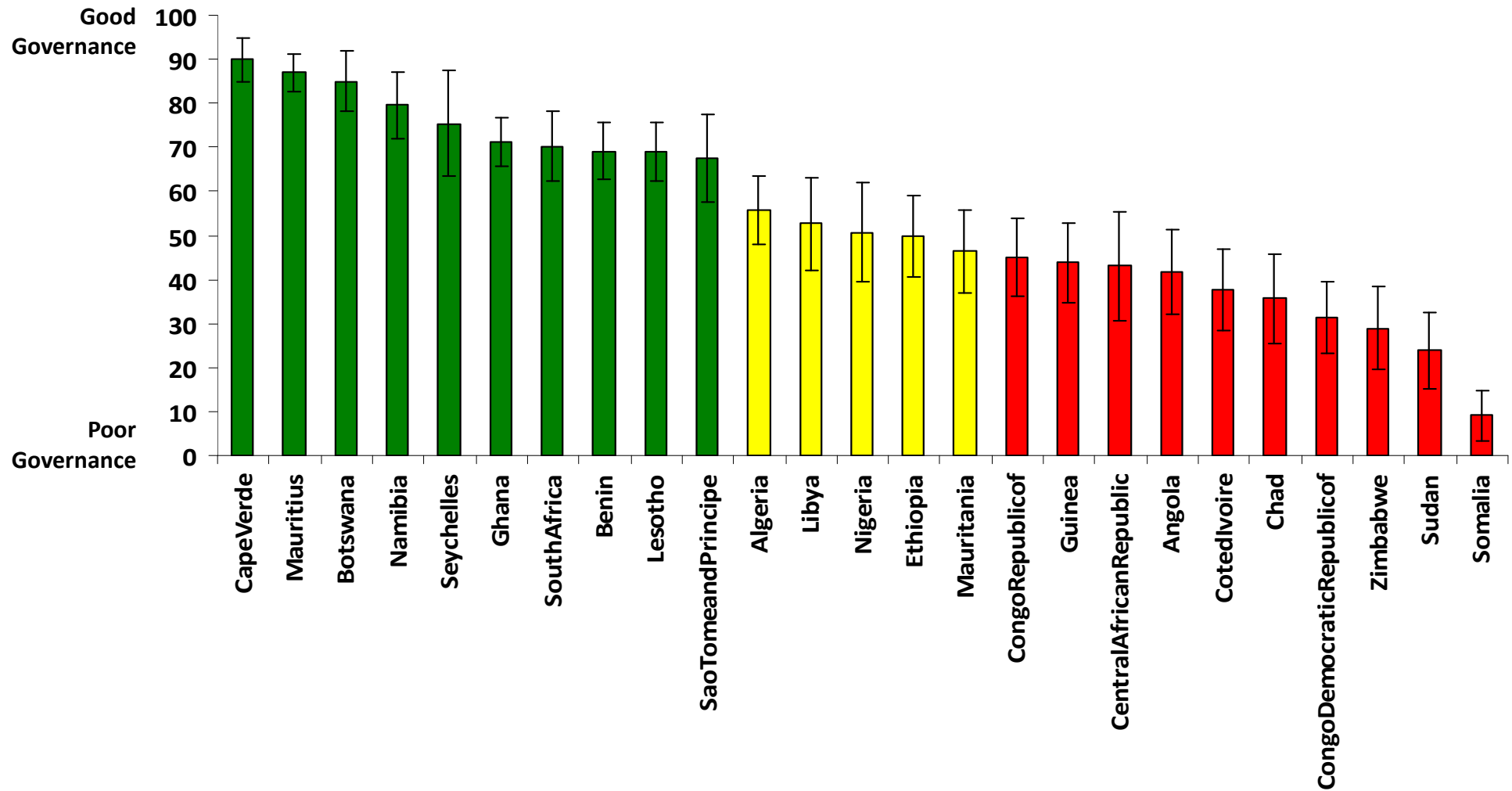
Rank	Country	Human Development Score, 07/08	Combined M&M SD 08	Bottom 5% M&M CI 07/08	Top 95% M&M CI 07/08
36	Rwanda	45.8	6.67	33.9	57.3
37	Guinea	45.4	7.37	30.2	58.5
38	Mali	45.3	7.01	28.2	62.6
39	Congo, Rep	45.2	5.67	31.8	55.9
40	Togo	45.0	7.27	30.4	60.1
41	Malawi	44.7	8.80	20.9	60.0
42	Zimbabwe	44.1	7.60	27.2	64.0
43	Burkina Faso	42.2	8.29	24.2	59.1
44	Angola	41.8	10.35	25.3	61.8
45	Sierra Leone	41.7	8.72	26.1	56.7
46	Cote d'Ivoire	41.5	6.44	26.9	53.5
47	Burundi	40.4	6.06	25.5	52.3
48	Somalia	38.5	17.07	10.7	68.3
49	Mozambique	37.5	5.68	21.7	47.7
50	Niger	36.1	8.60	20.2	51.9
51	Congo, Dem Rep	36.1	9.01	20.8	51.9
52	Chad	30.1	7.63	9.6	50.9
53	Central African Rep	28.3	7.12	16.2	48.9
27	Sample Average	53.8	8.2	35.0	70.5

IIAG Composite Scores, 2007/08 Period: *Top/Bottom 10 countries, and selected others*



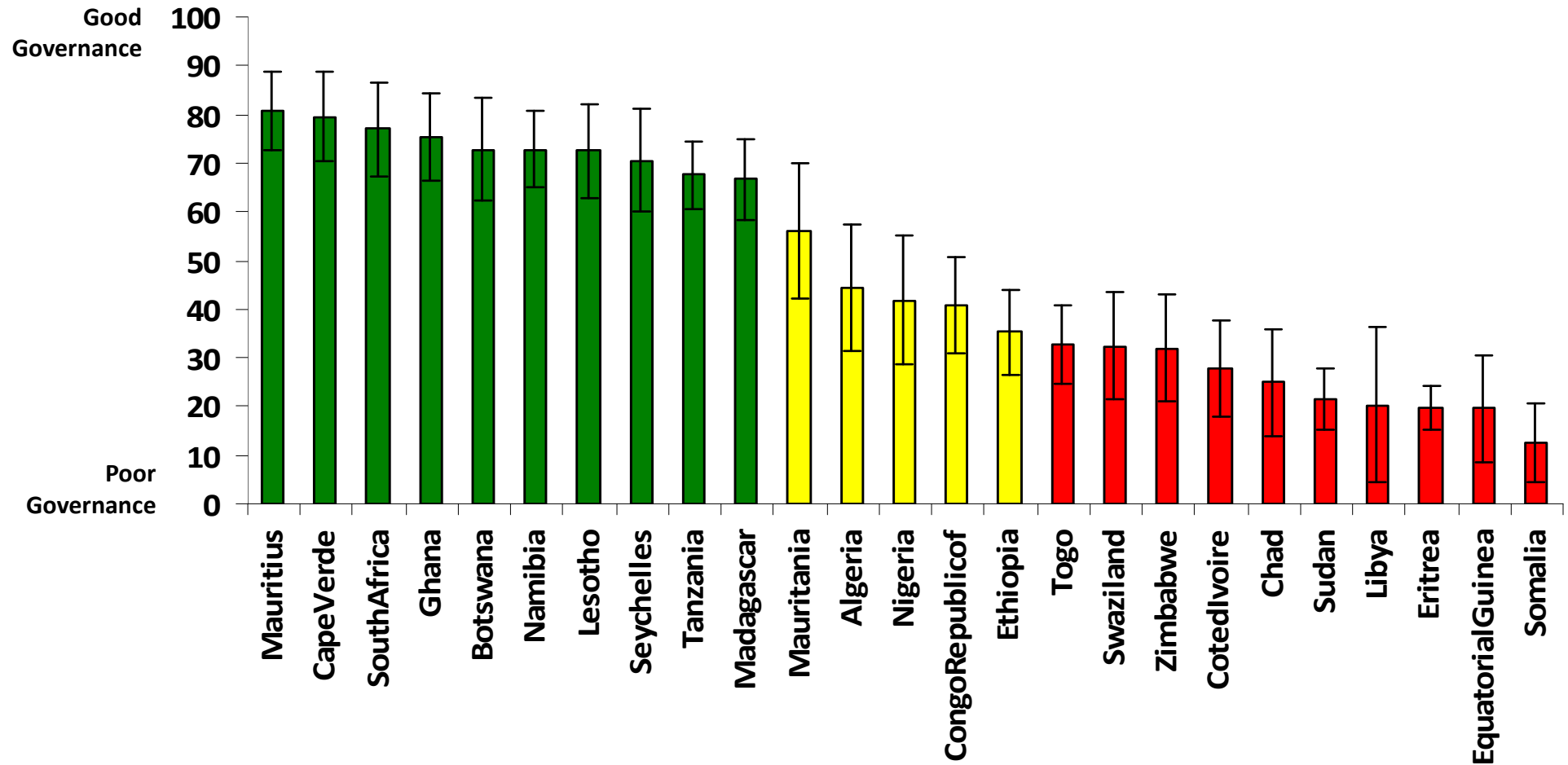
* Bars above each column represent margins of error

IIAG Safety & Rule of Law Score, 2007/08 Period: *Top/Bottom 10 countries, and selected others*



* Bars above each column represent margins of error

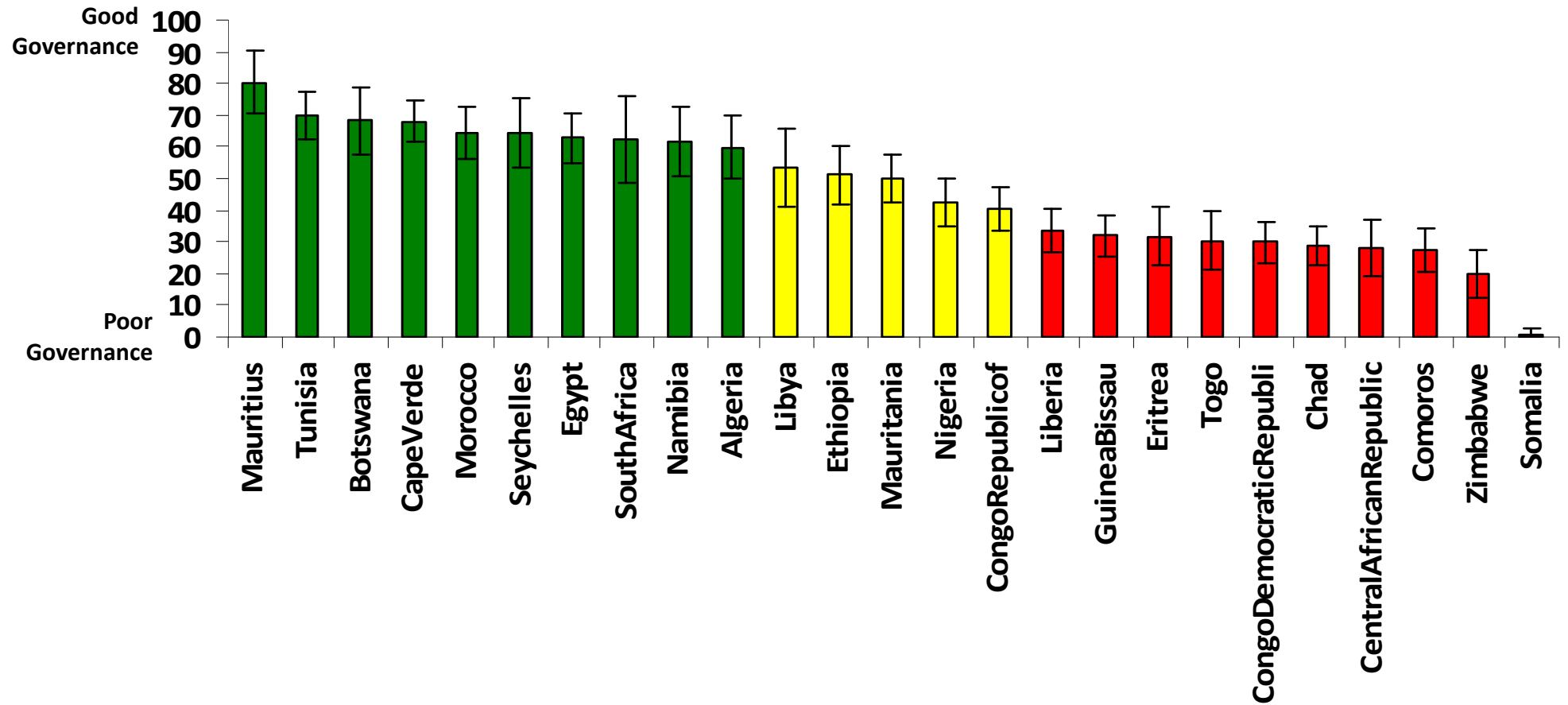
IIAG Participation & Human Rights Score, 2007/08 Period: *Top/Bottom 10 countries, and selected others*



* Bars above each column represent margins of error

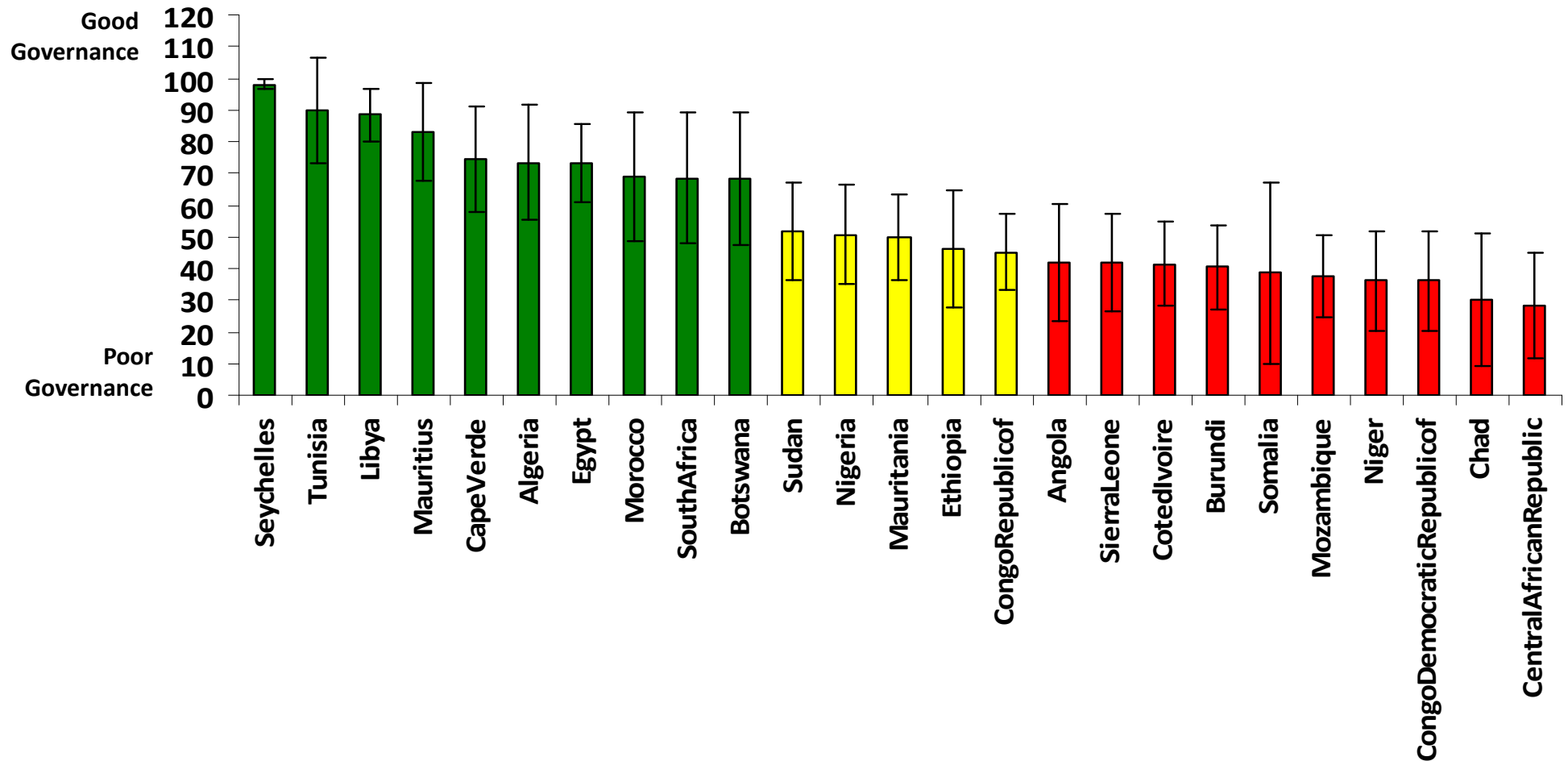
IIAG Sustainable Economic Opportunities Score, 2007/08

Period: *Top/Bottom 10 countries, and selected others*



* Bars above each column represent margins of error

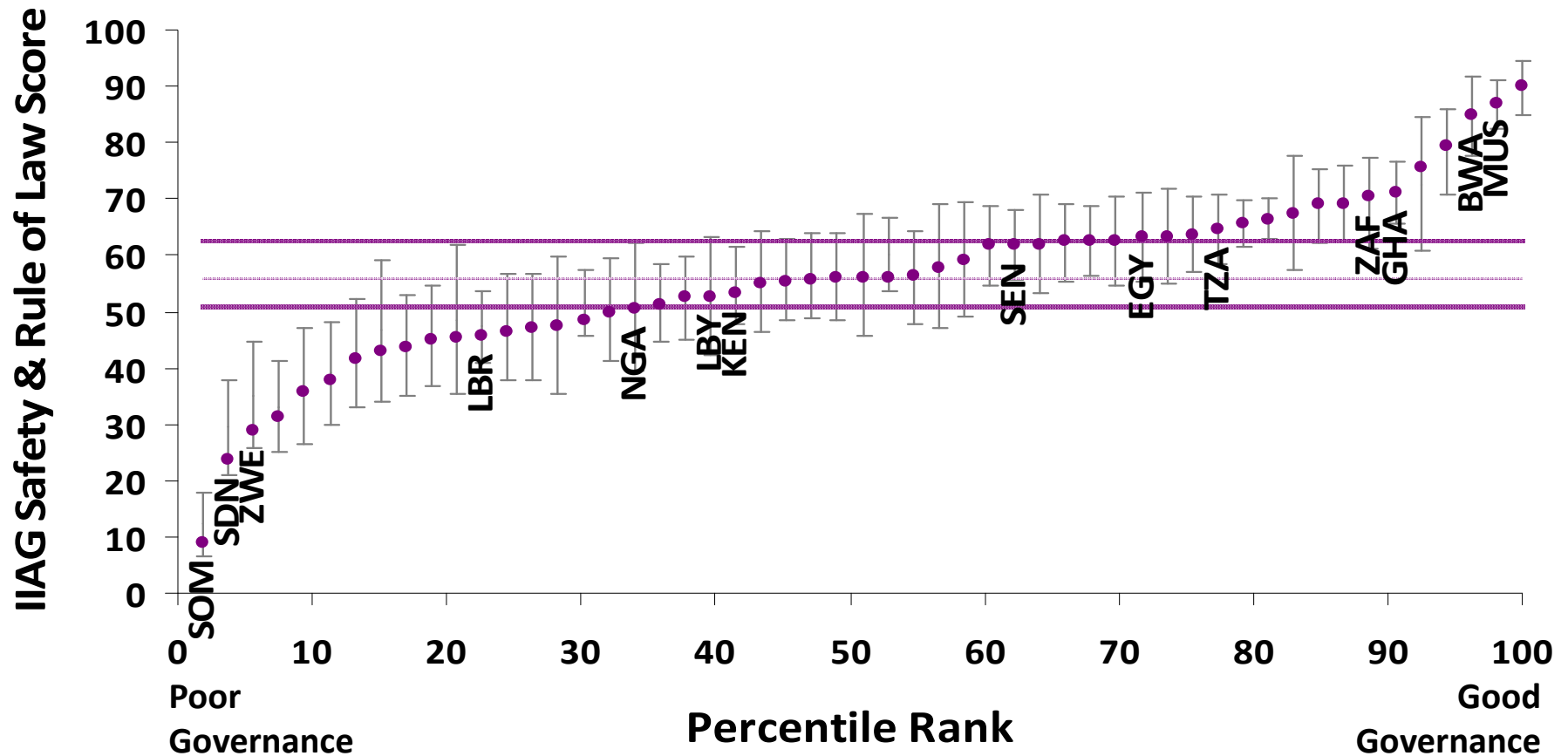
IIAG Human Development Score, 2007/08 Period: *Top/Bottom 10 countries, and selected others*



* Bars above each column represent margins of error

Uncertainty in IIAG Safety & Rule of Law Margin of Errors (M&M)

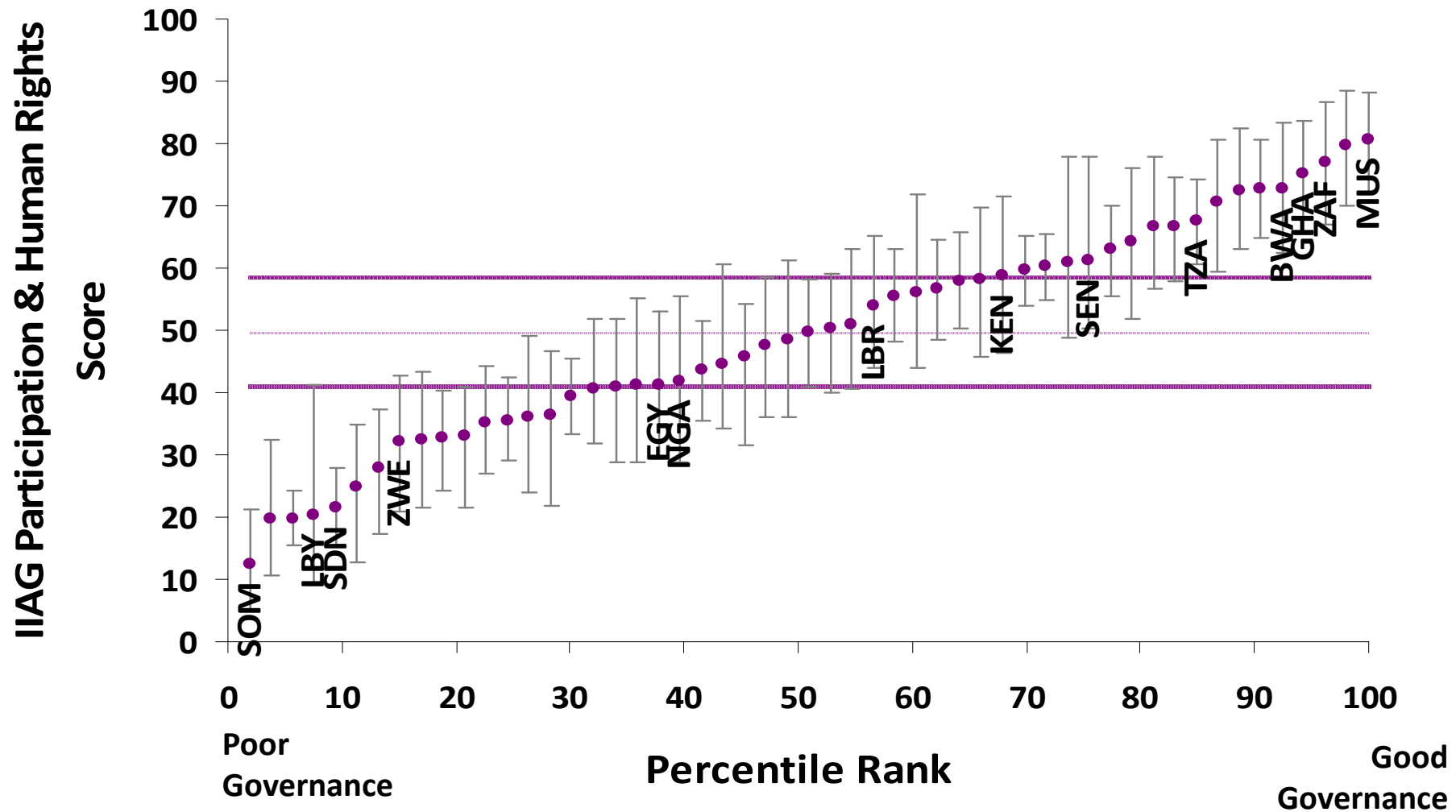
Graph, 2007/08 Period



Horizontal lines indicate terciles and median (56.0):

- Top tercile (62.4): 18 countries included; 4 countries with high confidence
- Middle Tercile (50.8-62.4): 17 countries included; no countries with high confidence
- Bottom tercile (50.8): 18 countries included; 6 countries with high confidence

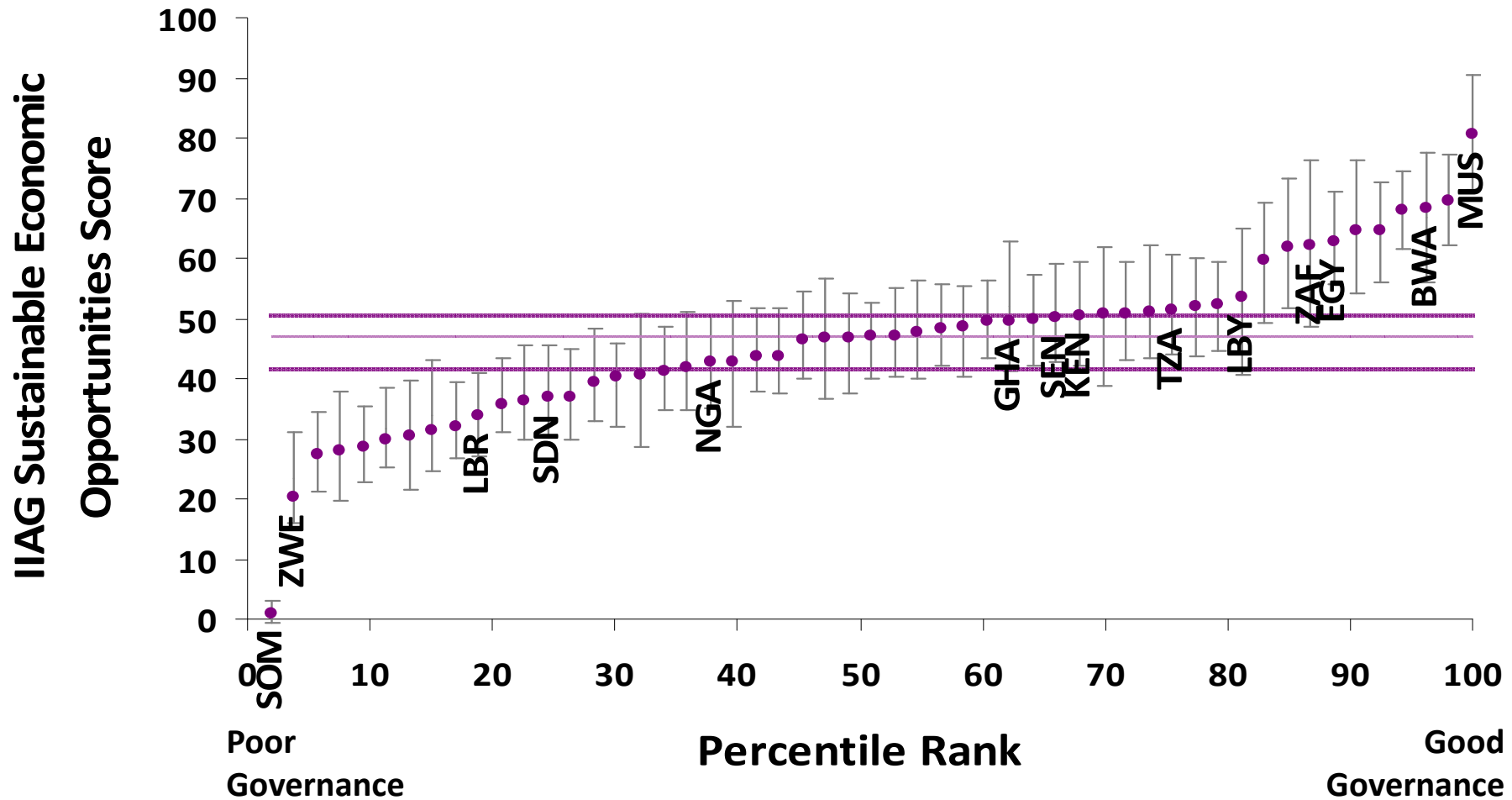
Uncertainty in IIAG Participation & Human Rights Margin of Errors (M&M) Graph, 2007/08 Period



Horizontal lines indicate terciles and median (49.8):

- Top tercile (58.6): 18 countries included; 27 9 countries with high confidence
- Middle Tercile (40.9-58.6): 17 countries included; no countries with high confidence
- Bottom tercile (40.9): 18 countries included; 7 countries with high confidence

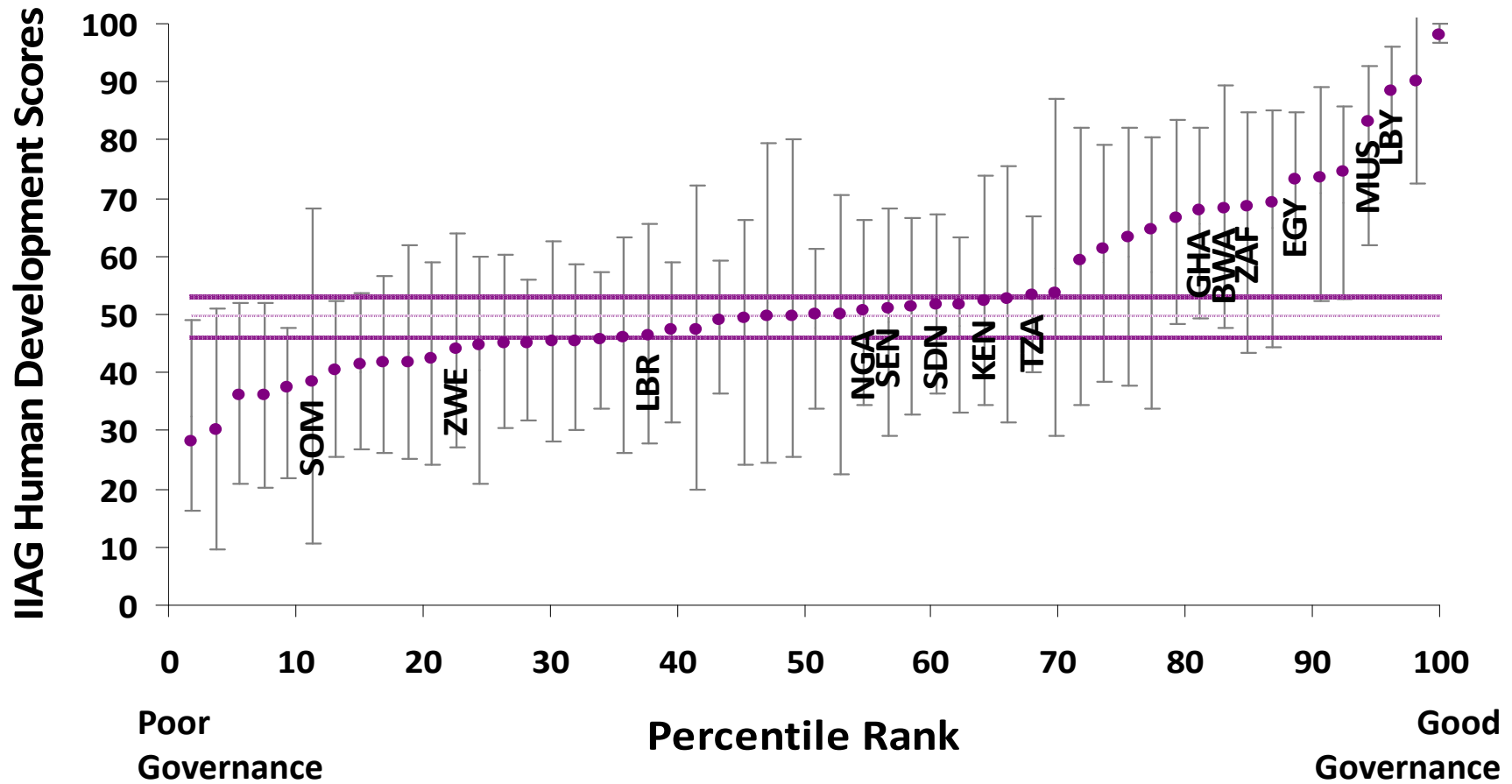
Uncertainty in IIAG Sustainable Economic Opportunities Margin of Errors (M&M) Graph, 2007/08 Period



Horizontal lines indicate terciles and median (47.0):

- Top tercile (50.3): 18 countries included; 8 countries with high confidence
- Middle Tercile (41.5-50.3): 17 countries included; no countries with high confidence
- Bottom tercile (41.5): 18 countries included; 9 countries with high confidence

Uncertainty in IIAG Human Development Margin of Errors (M&M) Graph, 2007/08 Period



Horizontal lines indicate terciles and median (49.9):

- Top tercile (53.1): 18 countries included; 5 countries with high confidence
- Middle Tercile (45.9-53.1): 17 countries included; no countries with high confidence
- Bottom tercile (45.9): 18 countries included; no countries with high confidence

Interpretation of estimates of Imprecision

- On Average, the average for the Uncertainty Confidence Interval (CI) range (bottom 5% to top 95% confidence level) from Measurement Error and of Missingness:
 - Range of 12 score points for IIAG composite for 2007/8
 - Range of 24 score points on average for the 4 components, e.g. 16 range points in Safety & Rule of Law (S&RL), 35 range points in Human Development (HD)
- This means that on average, IIAG composite score can be thought as having a +/-6 score point margin of error
- On average, at the subcomponent level, such margin of error is twice as large (+-12 points, but varies by component)
- However, another source of uncertainty for IIAG composite, not in the above: uncertainty in weights of each component: *if instead of equal weights, HD and/or SEO could have any other weight less than 25% (and thus raising the possible weight of the S&RL and of P&HR?*
Next: a look w/ this source as well...

Uncertainty in IIAG Composite Top Tercile Performance Sample, 2007/08 Period

Country	IIAG Composite score, 07/08	Bottom 5% M&M CI 07/08	Top 95% M&M CI 07/08	Bottom Weighted 5% CI 07/08	Top Weighted 95% CI 07/08
Mauritius	82.8	76.2	87.2	82.6	83.8
Cape Verde	78.0	71.2	82.4	78.0	84.4
Seychelles	77.1	72.3	82.5	71.1	81.4
Botswana	73.6	66.7	80.6	73.9	78.6
South Africa	69.4	62.3	75.4	69.1	73.4
Namibia	68.8	61.8	75.2	69.2	75.7
Ghana	66.0	61.6	71.5	64.4	72.9
Tunisia	65.8	60.0	71.7	52.6	66.8
Lesotho	61.2	55.0	68.4	61.7	70.2
Sao Tome & Principe	60.2	53.4	66.6	57.6	65.8
Egypt	60.1	55.1	65.3	52.6	60.5
Tanzania	59.2	54.8	64.1	59.6	65.7
Madagascar	58.4	52.6	63.2	58.8	64.7
Algeria	58.4	52.1	63.7	50.6	59.2
Benin	58.2	50.4	64.7	58.7	67.3
Morocco	57.8	50.9	63.5	49.4	57.5
Senegal	56.0	49.6	61.7	56.3	61.2
Zambia	55.3	50.6	59.7	55.7	62.6

Uncertainty in IIAG Composite Middle Tercile Performance Sample, 2007/08 Period

Country	IIAG Composite score, 07/08	Bottom 5% M&M CI 07/08	Top 95% M&M CI 07/08	Bottom Weighted 5% CI 07/08	Top Weighted 95% CI 07/08
Gambia	55.1	46.3	61.0	52.4	57.3
Mali	54.5	49.4	60.6	54.7	61.3
Gabon	53.9	45.9	61.0	51.2	56.3
Kenya	53.7	48.2	61.0	53.8	56.0
Libya	53.7	47.8	60.2	37.3	56.2
Uganda	53.6	47.3	60.7	53.7	56.9
Malawi	53.0	46.7	58.1	53.5	61.3
Mozambique	52.4	47.6	56.8	52.3	62.2
Burkina Faso	51.6	45.8	57.3	51.7	58.3
Mauritania	50.6	45.1	57.2	50.6	51.2
Swaziland	49.4	42.3	57.5	48.0	49.6
Sierra Leone	48.9	44.4	54.0	49.3	55.9
Comoros	48.6	40.8	56.0	44.9	54.8
Rwanda	48.5	43.5	53.7	48.6	50.5
Cameroon	47.0	43.1	51.1	45.4	46.9
Niger	46.6	41.4	52.1	46.4	52.9
Nigeria	46.5	39.6	52.7	45.2	47.6

Uncertainty in IIAG Composite Bottom Tercile Performance Sample, 2007/08 Period

Country	IIAG Composite score, 07/08	Bottom 5% M&M CI 07/08	Top 95% M&M CI 07/08	Bottom Weighted 5% CI 07/08	Top Weighted 95% CI 07/08
Djibouti	46.0	38.7	55.7	43.9	47.5
Ethiopia	45.6	40.0	52.0	42.7	45.9
Burundi	45.3	41.8	50.7	45.5	52.1
Liberia	44.9	39.6	52.2	43.8	49.6
Guinea-Bissau	43.5	36.4	50.9	41.9	47.2
Congo, Rep	42.8	37.7	47.6	42.1	43.5
Angola	41.0	35.6	47.4	40.5	42.5
Togo	40.8	35.9	46.1	39.2	44.0
Guinea	40.4	34.8	46.0	39.0	41.7
Equatorial Guinea	39.4	32.4	48.1	33.9	39.9
Eritrea	37.0	32.0	43.5	32.5	39.1
Cote d'Ivoire	36.6	32.4	42.5	33.0	36.5
Central African Republic	35.0	30.5	43.3	35.4	41.5
Sudan	33.4	30.1	40.3	23.3	34.1
Congo, Dem Rep	33.2	29.1	39.4	32.4	34.2
Zimbabwe	31.3	27.6	39.8	27.5	34.8
Chad	29.9	23.9	36.6	29.7	30.3
Somalia	15.2	8.3	24.0	8.5	20.1
Whole Sample Average	51.2	45.4	57.4	48.9	54.9

Why generally to avoid comparisons over time – at least for now (yet exceptions?)

- **Calculating uncertainty (imprecision) confidence ranges to make meaningful comparisons across time for a country is a complex undertaking**
- **Confidence range may exceed or be below the estimates of confidence interval ranges for cross-country comparisons (depending on whether the persistence in governance or in margins of error is more dominant)**
- **At any rate, observed changes in governance within one country over time are small compared with cross country differences and with possible margins of errors**
- **Governance generally does not change substantially very quickly (in 1 or 2 years), though it can in 5+ years**

Uncertainty in IIAG Composite, 2005 & 2008 Comparison: Top Tercile, by 2008 ranks

Country	IIAG Composite score, 07/08	IIAG Composite score, 04/05	Difference in Composite Scores, 2005-2008	Bottom 5% M&M CI 07/08	Top 95% M&M CI 07/08	Bottom 5% M&M CI 04/05	Top 95% M&M CI 04/05
Mauritius	82.8	77.5	5.4	76.2	87.2	70.2	84.4
Cape Verde	78.0	73.7	4.3	71.2	82.4	65.3	84.1
Seychelles	77.1	75.6	1.5	72.3	82.5	69.2	81.2
Botswana	73.6	72.8	0.8	66.7	80.6	63.6	81.5
South Africa	69.4	69.1	0.3	62.3	75.4	61.0	75.7
Namibia	68.8	66.7	2.1	61.8	75.2	60.6	74.3
Ghana	66.0	61.9	4.0	61.6	71.5	54.6	71.2
Tunisia	65.8	63.1	2.7	60.0	71.7	54.2	69.6
Lesotho	61.2	59.4	1.8	55.0	68.4	53.1	66.7
Sao Tome and Principe	60.2	58.9	1.4	53.4	66.6	51.3	66.7
Egypt	60.1	53.0	7.1	55.1	65.3	46.5	60.8
Tanzania	59.2	53.8	5.5	54.8	64.1	48.3	60.6
Madagascar	58.4	56.8	1.5	52.6	63.2	50.1	63.8
Algeria	58.4	54.9	3.5	52.1	63.7	47.7	61.8
Benin	58.2	55.5	2.7	50.4	64.7	49.0	62.5
Morocco	57.8	57.5	0.3	50.9	63.5	49.3	64.2
Senegal	56.0	58.2	-2.3	49.6	61.7	52.1	65.3
Zambia	55.3	51.5	3.8	50.6	59.7	44.2	57.9

*M&M stands for Measurement and Missing Variable Uncertainty

Uncertainty in IIAG Composite, 2005 & 2008 Comparison: Middle Tercile, by 2008 ranks

Country	IIAG Composite score, 07/08	IIAG Composite score, 04/05	Difference in Composite Scores, 2005-2008	Bottom 5% M&M CI 07/08	Top 95% M&M CI 07/08	Bottom 5% M&M CI 04/05	Top 95% M&M CI 04/05
Gambia	55.1	57.2	-2.1	46.3	61.0	46.7	66.0
Mali	54.5	52.5	2.1	49.4	60.6	45.8	59.3
Gabon	53.9	51.6	2.3	45.9	61.0	44.1	58.2
Kenya	53.7	53.2	0.5	48.2	61.0	46.3	60.3
Libya	53.7	51.2	2.5	47.8	60.2	40.6	59.3
Uganda	53.6	50.1	3.5	47.3	60.7	46.0	57.3
Malawi	53.0	50.9	2.2	46.7	58.1	44.8	58.2
Mozambique	52.4	53.4	-1.0	47.6	56.8	47.2	61.8
Burkina Faso	51.6	52.0	-0.4	45.8	57.3	44.3	60.8
Mauritania	50.6	49.9	0.7	45.1	57.2	43.5	58.2
Swaziland	49.4	46.2	3.2	42.3	57.5	38.4	56.8
Sierra Leone	48.9	43.4	5.5	44.4	54.0	36.4	51.7
Comoros	48.6	48.7	-0.2	40.8	56.0	41.5	56.6
Rwanda	48.5	47.1	1.5	43.5	53.7	41.3	57.8
Cameroon	47.0	42.5	4.5	43.1	51.1	36.4	49.4
Niger	46.6	44.5	2.1	41.4	52.1	38.0	52.4
Nigeria	46.5	43.2	3.3	39.6	52.7	36.1	51.3

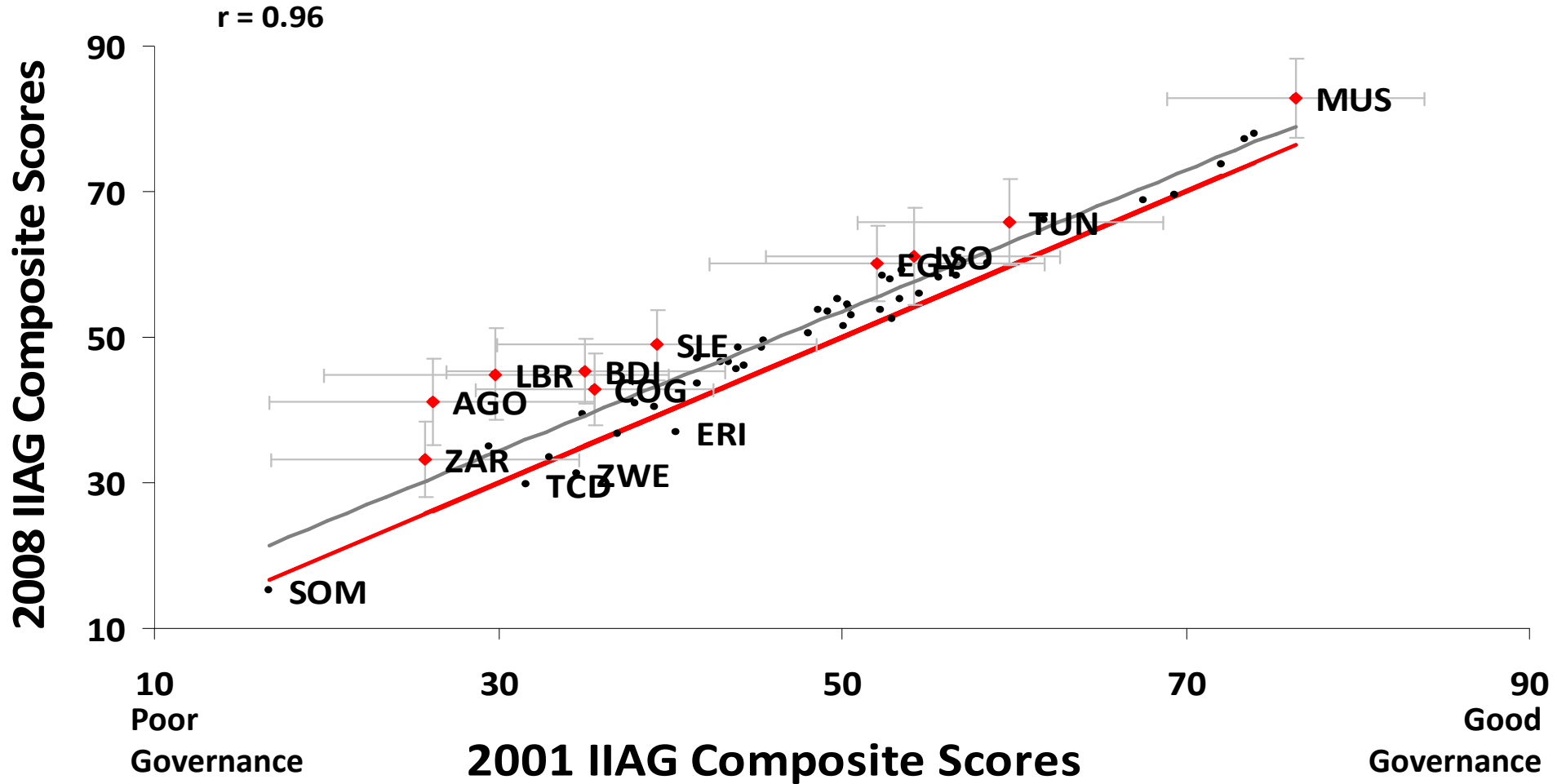
Uncertainty in IIAG Composite, 2005 & 2008 Comparison: Bottom Tercile, by 2008 ranks

Country	IIAG Composite score, 07/08	IIAG Composite score, 04/05	Difference in Composite Scores, 2005-2008	Bottom 5% M&M CI 07/08	Top 95% M&M CI 07/08	Bottom 5% M&M CI 04/05	Top 95% M&M CI 04/05
Djibouti	46.0	44.7	1.3	38.7	55.7	37.2	53.0
Ethiopia	45.6	45.8	-0.2	40.0	52.0	38.3	54.1
Burundi	45.3	39.2	6.1	41.8	50.7	33.8	49.9
Liberia	44.9	33.8	11.1	39.6	52.2	26.5	43.2
Guinea- Bissau	43.5	43.2	0.3	36.4	50.9	34.5	51.5
Congo, Dem Rep	33.2	28.5	4.7	29.1	39.4	22.4	39.1
Angola	41.0	34.4	6.6	35.6	47.4	27.5	44.0
Togo	40.8	39.7	1.1	35.9	46.1	33.6	46.4
Guinea	40.4	42.6	-2.2	34.8	46.0	36.3	49.9
Equatorial Guinea	39.4	36.7	2.7	32.4	48.1	27.9	44.7
Eritrea	37.0	42.2	-5.3	32.0	43.5	34.9	50.9
Cote d'Ivoire	36.6	35.9	0.7	32.4	42.5	30.2	45.4
Central African Rep	35.0	30.7	4.3	30.5	43.3	21.9	38.2
Sudan	33.4	34.5	-1.0	30.1	40.3	28.1	43.5
Congo, Rep	42.8	40.0	2.8	37.7	47.6	34.1	46.8
Zimbabwe	31.3	33.9	-2.6	27.6	39.8	28.4	46.1
Chad	29.9	33.0	-3.2	23.9	36.6	26.0	40.4
Somalia	15.2	17.9	-2.7	8.3	24.0	8.0	36.0
Sample Average	51.2	49.3	1.9	45.4	57.4	42.2	57.6

IIAG Summary Table, 2007/08 Period

Variable	2001	2002	2003	2004	2005	2006	2007	2008
IIAG Composite Score Average	47.5	48.1	48.2	48.4	49.3	49.8	50.7	51.2
M&M scores Range	17.13	16.69	16.42	16.12	15.35	10.85	14.09	11.99
Weights Uncertainty scores Range	6.53	6.62	6.59	6.45	6.38	6.29	6.09	5.96
IIAG Composite Rank Average	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0
IIAG Composite rank range (M&M)	20.2	19.1	19.3	19.2	18.2	13.6	16.6	14.6
IIAG weights uncertainty Composite rank range	6.9	7.0	6.9	7.3	7.5	7.5	7.1	7.2
% of N.A.s	7.49	6.28	6.23	6.16	6.09	6.12	6.12	6.09
% Imputed	61.48	57.92	56.84	47.31	31.88	5.11	14.22	4.68
% Observed data	31.03	35.80	36.93	46.53	62.03	88.77	79.65	89.23

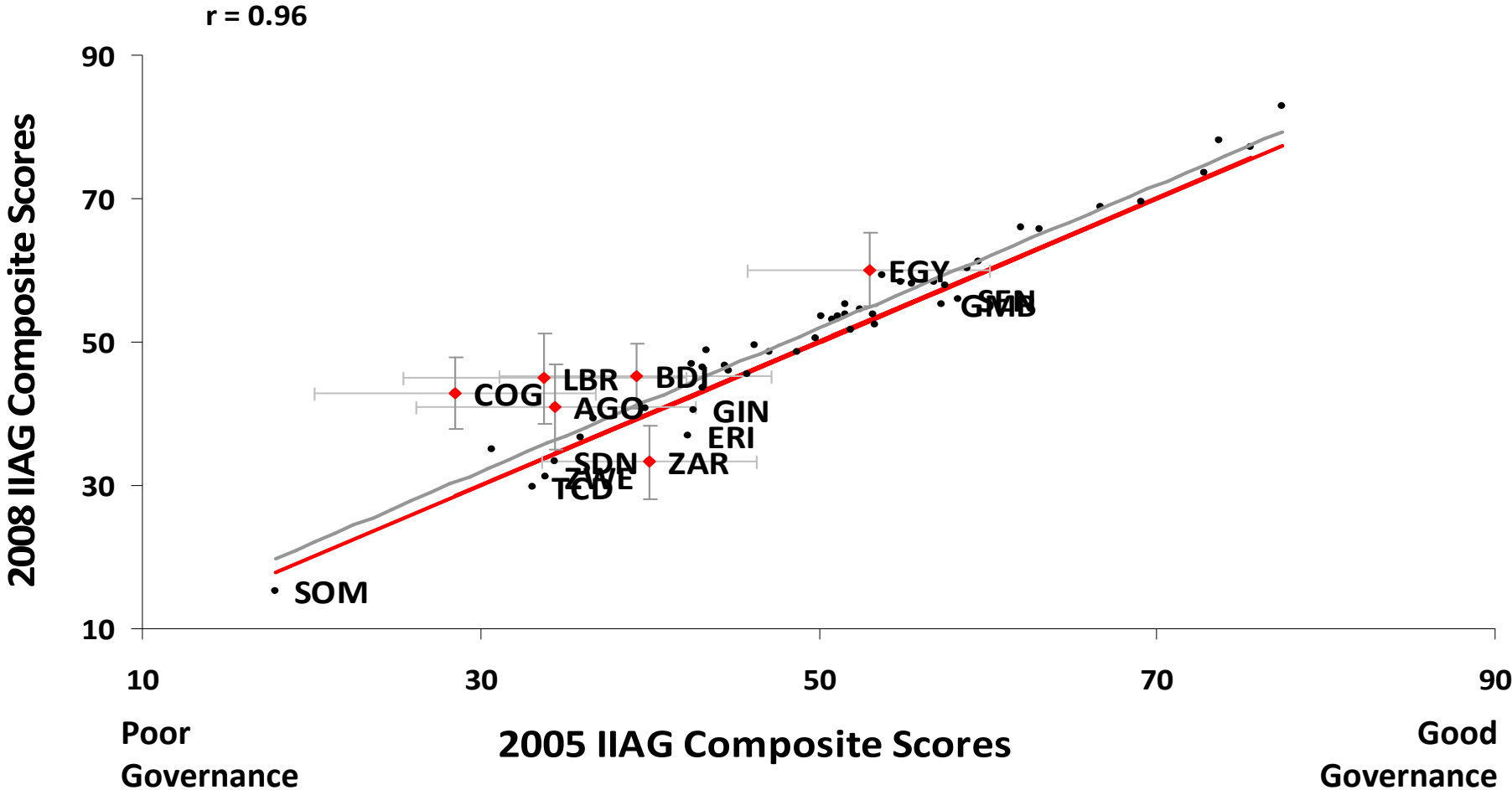
Changes over Time in Uncertainty in IIAG Composite, 2000/01-2007/08 Periods



*Margins of errors (M&M) provided for countries experiencing greater than 6 point changes in governance over time

*M&M stands for Measurement and Missing Variable Uncertainty

Changes over Time in Uncertainty in IIAG Composite, 2004/05-2007/08 Periods



*Margins of errors (M&M) provided for countries experiencing greater than 6 point changes in governance over time

Noteworthy Changes in African Governance Over Time?

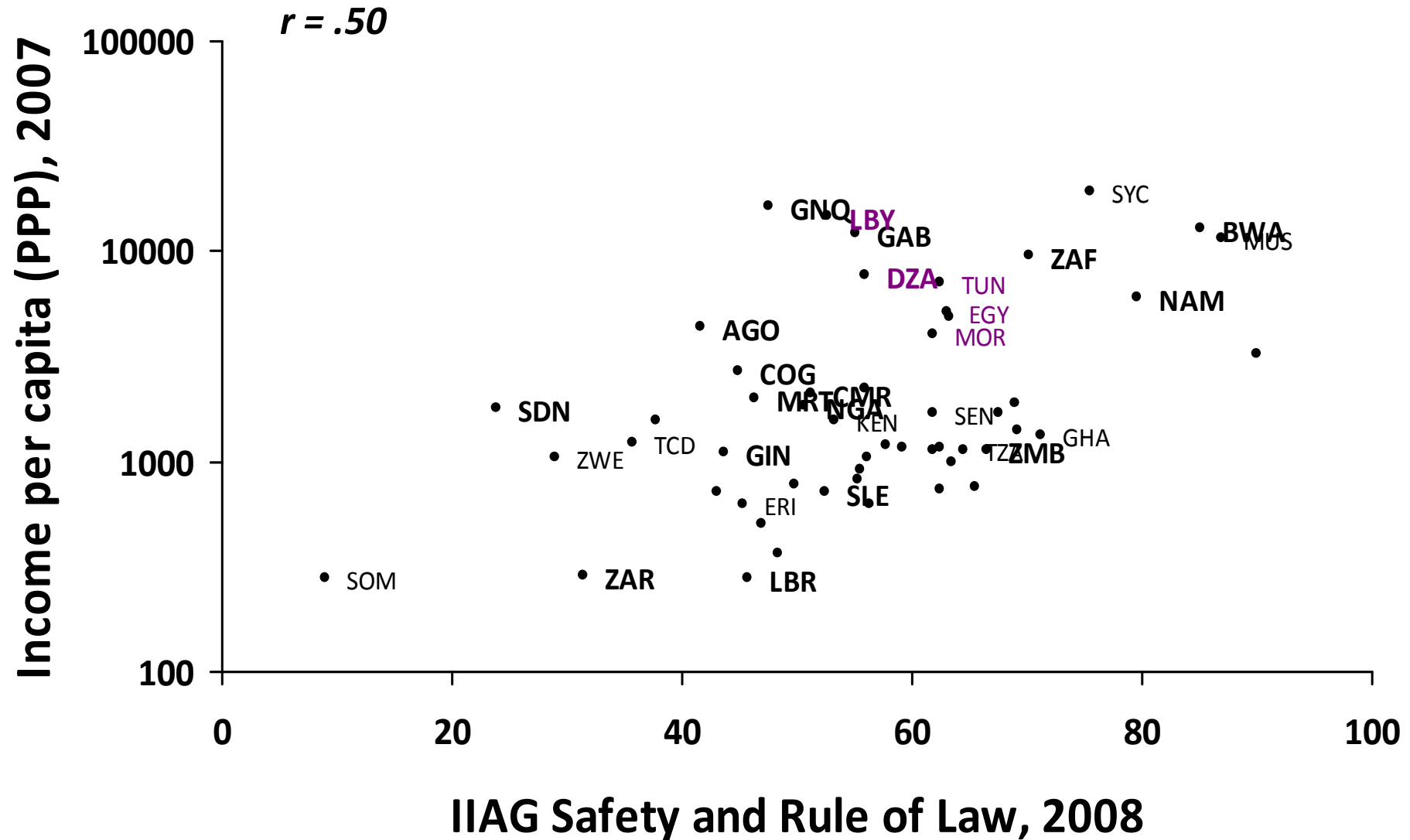
- **Very difficult to make comparisons over time; few changes are statistically significant or highly meaningful. Margins of error need to be taken seriously**
- **Yet some insights from the IIAG results can be gathered from some very large changes:**
 - **In composite IIAG, with high confidence, Liberia shows meaningful improvements over the past (and possibly Egypt)**
 - **Two countries show meaningful deterioration: Gambia and Mozambique (and possibly Eritrea as well).**
 - **In specific IIAG components: in the S&RL component huge deteriorations over past year for both Eritrea and Mauritania**
 - **Huge improvements in P&HR in Liberia, Burundi and Angola since 2003, vs. huge deterioration of Ethiopia since 2001.**
 - **Very large improvement in HD in Djibouti and Tanzania since early in the decade, vs. deteriorations in Togo and Zimbabwe**
- **Beyond these, hard to detect significant changes over time**

Potential Applications & some Research

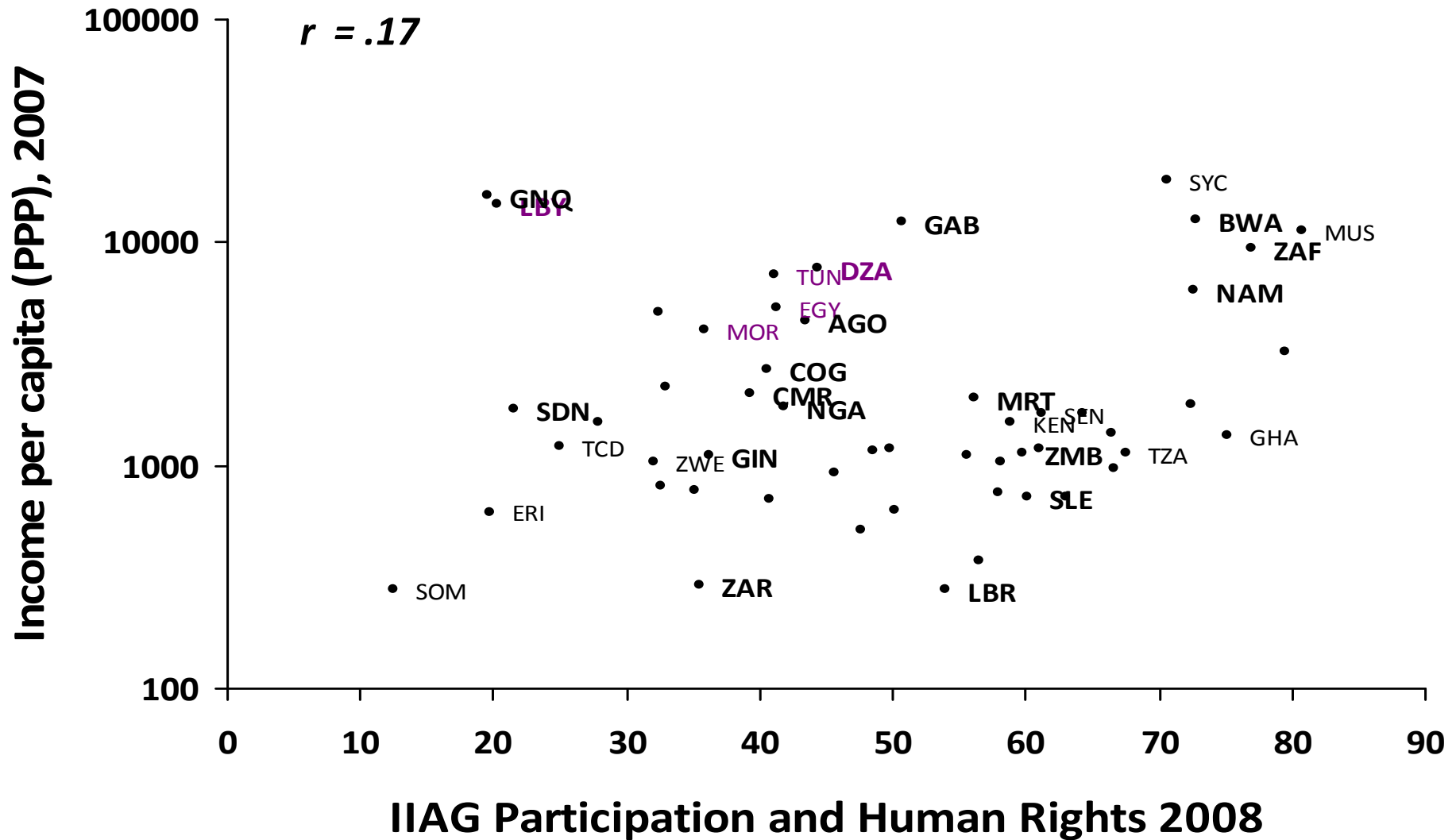
On the links between IIAG components and national incomes – some puzzles?

- **How do different indices and methods end up rating countries differently?**
- **What is actually driving the changes over time in these indices, and what does it say about the robustness of the index itself?**
- **How can IIAG and similar indicators help us assess aid effectiveness to Africa? Is aid selective?**

IIAG 2007/08 Period Safety/Rule of Law & Income per capita (PPP 2007)



IIAG 2007/08 Period Participation & Human Rights and Income pc (PPP 2007)



Some concluding reflections

- Improvement has taken place, due to collective effort
- Analytical & Research potential of the IIAG: *by more rigor, enhancing academic credibility and use of IIAG*
- Taking margins of error very seriously: cautions
- Agenda for further improving the IIAG for next year: i) improved data through multi-pronged approach (survey data, dealing with weak variables, new data); iii) improved over-time comparability; iv) review of HD, and, v) further enhanced African input/content/collaboration
- Not shy about IIAG main strengths, while safeguarding ‘truth in advertising’ regarding pending challenges and imperfections (*circumspection, transparency, accuracy, etc*)