

# The Democracy Ranking 2008 of the Quality of Democracy: Method and Ranking Outcome

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## **1. Method of the Democracy Ranking 2008 of the Quality of Democracy**

The Democracy Ranking 2008 is based on a unique quantitative model. This model is governed by the following methodic principles:

1. *Conceptual and methodic source:* The Democracy Ranking 2008 is based on the originally developed “Feasibility Study” (Campbell and Sükösd, 2002) and early experiences gained from the “Pilot Ranking 2000” (Campbell and Sükösd, 2003). The feasibility study developed the general framework and conceptual architecture of the “dimensions” of the Democracy Ranking 2008 and suggested furthermore a specific assignment of quantitative indicators to the different dimensions. In the “Pilot Ranking 2000” this general framework was tested empirically for the first time. Emphasizing the need for a permanent learning process and in reflection of discussions and discourse, the Democracy Ranking 2008 moderately modified and adapted the set of assigned indicators and their weighting. Future Democracy Rankings might continue these procedures of indicator and weight adjustment.<sup>1</sup> However, the past ranking years then always will be recalculated, thus enabling a steady and continuous comparison across time, reaching back to the first ranking years as initial benchmark. The “Basic Concept for the Democracy Ranking” (Campbell 2008) provides further conceptual and theoretical evidence for the Democracy Ranking 2008 and the successively planned democracy rankings.
2. *Objectives:* The Democracy Ranking 2008 creates a comparative ranking of the quality of democracy for two two-year periods of all democracies (country-based democracies) world-wide. The scope and

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<sup>1</sup>) This also underscores the premise that a “perfect” model for democracy ranking does not exist. Or to phrase it differently: there never will be unanimous consensus about what such a perfect model would have to be. Modifications of indicator usage thus leverage the opportunity of creating alternative insights in democracy.

format of the ranking is global. As democracies all countries are classified that are “free” or at least “partly free”.<sup>2</sup> “Not free” countries are not considered as being democratic and thus are not included in the democracy ranking.<sup>3</sup> The Democracy Ranking 2008 is interested in displaying the (average) ranking scores for each two-year period specifically as well as in demonstrating ranking score increases and decreases by contrasting these two two-year periods. This encourages that in addition to the actual ranking placement also changes over time are reflected and acknowledged. The results and scores of the Democracy Ranking 2008 may be interpreted as a general orientation how the democracies compare and rank to each other in a global format with regard to the quality of democracy. The Democracy Ranking 2008 wants to encourage discussions and discourse. More focused country case studies can reveal how plausible or implausible these ranking scores are for specific democracies.

3. *Country sample (covered democracies):* All countries are covered by the current ranking that fulfill the following criteria; (a) are classified by Freedom House as “free” or at least “partly free” during the whole years 2004-2006<sup>4</sup>; (b) have a population of at least one million; (c) and where a maximum number of indicators with missing values<sup>5</sup> per dimension was not exceeded. Furthermore, not covered countries (because they are not systematically represented by the used sources) are: Hong Kong, Puerto Rico, Taiwan, West Bank and Gaza. In total,

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<sup>2</sup>) This decision makes explicit that only free or partly free countries should be included in a democracy ranking. A democracy ranking is not the proper location for non-free countries.

<sup>3</sup>) For assessments of how free or not free countries (democracies) are, we refer to Freedom House as key source.

<sup>4</sup>) Freedom House released the “Map of Freedom 2008”, referring to the year 2007, in January 2008. At that time most of the data groundwork for the Democracy Ranking 2008 already was completed. Of course the effect could occur that some of the countries that Freedom House listed as free or partly free during 2004-2006 may be re-categorized as “not free” in 2007 or 2008.

<sup>5</sup>) Because of this “missing” rule it was decided not to cover Bosnia and Herzegovina, and Serbia and Montenegro by the Democracy Ranking 2008. For example, Freedom House did not release freedom scores explicitly for Serbia and Montenegro for 2001-2002 and 2004-2005.

this results in a sample of 98 countries for the Democracy Ranking 2008.

4. *Covered years (2001-2002 and 2004-2005):* The ranking consists of two rankings, focusing on average values of the two two-year periods 2001-2002 and 2004-2005. This adds in a dynamic component, allowing for a comparison and tracking of changes and shifts of ranking positions over time.
5. *The individual dimensions as a basis for the final comprehensive (aggregated) ranking:* In conceptual terms, the Democracy Ranking 2008 is based on the following six individual dimensions (one political dimension, five non-political dimensions); (a) politics (political system); (b) gender (socioeconomic gender equality); (c) economy (economic system); (d) knowledge (knowledge-based information society, education and research); (e) health (health status and health system); and (f) environment (environmental sustainability).
6. *Assignment of indicators per dimension and the ranking aggregation procedure:* The following procedures are applied; (a) per dimension, a specific set of quantitative indicators has been assigned; (b) for 2001-2002 as well as 2004-2005 average indicator values are being calculated; (c) for the whole two two-year period 2001-2005 (2001-2002 and 2004-2005) all assigned indicators are “numerically proportionally” transformed into a value range of “1-100”. “1” represents the weakest (poorest) value<sup>6</sup>, and “100” the strongest (best) value, with regard to the quality of democracy; (d) per dimension, specific ranking scores are calculated for all the covered democracies for 2001-2002 and 2004-2005; (e) finally, on the basis of the ranking scores (indicator values) of the individual dimensions and in accordance with a specific weighting of those dimensions, the six

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<sup>6</sup>) The decision to use “1”, and not “0”, as the lowest value should deliver the symbolic message that in context of a democracy ranking every democracy ranks above zero and thus falls in a “positive” value range.

dimensions are being aggregated to the comprehensive Democracy Ranking 2008.

7. *Documentation of the indicators assigned per dimension:* In the Appendix, the indicators are being exactly documented that have been used and assigned per dimension. In total, the Democracy Ranking 2008 is based on 45 indicators.
8. *Weighting of the individual dimensions:* The following weight measures are assigned to the dimensions for the procedure of the comprehensive ranking aggregation for the periods 2001-2002 and 2004-2005; (a) politics 50%; (b) gender 10%; (c) economy 10%; (d) knowledge 10%; (e) health 10%; and (f) environment 10%.
9. *Weighting of indicators in context of the dimensions:* Possible weight measures of the indicators for the ranking of democracies in the context of individual dimensions are revealed in the Appendix. Weights should indicate the potential influence of different indicators on the concept of the quality of democracy.
10. *Treatment of missing values for the indicators:* In case of missing values for indicators of the five non-political dimensions, the year 2000 was leveraged as an estimator for 2001-2002 and the year 2003 as an estimator for 2004-2005. For the political dimension the years 2000 and 2003 were not used as estimators, because normally there were no values for 2000 and 2003, when also no values were available for 2001-2002 and 2004-2005. Further specifications for the political dimension and five non-political dimensions are, with regard to the treatment of missing values for the individual country-based democracies; (a) in case of missing values for the whole period 2001-2002 (and 2000), the transformed (1-100) average value of 2004-2005 was taken; (b) in case of missing values for the whole period 2004-2005 (and 2003), the transformed (1-100) average value of 2001-2002 was taken; (c) in case of missing values for the total period 2000-2005, the transformed (1-100) average score of that country

(democracy) for that specific dimension (2001-2002 and 2004-2005) was taken.

11. *Comprehensive gender dimension:* Gender indicators with a political orientation are assigned to the political dimension, thus the political dimension already contains gender information. The gender dimension of the Democracy Ranking 2008 falls more in line with socioeconomic gender equality, where the socioeconomic status of women is being compared across different democracies. To know what a possible ranking pattern of a broader gender dimension might be, the Democracy Ranking 2008 calculates a “comprehensive gender dimension” (a so-called seventh dimension). The ranking scores of that comprehensive gender dimension are also documented; however, they do not impact the aggregated ranking of the Democracy Ranking 2008 (only the socioeconomic gender dimension does). The comprehensive gender dimension results from the dimension of socioeconomic gender equality and the political indicators P1-P4 (see the Appendix for an exact definition), where the following weight measures are being assigned: “socioeconomic gender equality” 50%, P1 15%, P2 15%, P3 15%, and P4 5%.
  
12. *Empirical source of the indicators for the Democracy Ranking 2008:* All indicators for the five non-political dimensions (gender [socioeconomic gender equality], economy, knowledge, health, and environment) are taken from the World Bank CD-ROM publication “World Development Indicators ’07” (World Bank, 2007). In that context it should be mentioned that these World Development Indicators frequently are pooled by the World Bank from other renowned sources. For each indicator, the World Bank always cites precisely the original data source. Concerning the political dimension, reference is being made to Freedom House (most prominently the “Freedom in the World”<sup>7</sup> country ranking database) as key source for the political indicators. Additional sources for the political dimension are the United Nations Development Program (e.g., “Human

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<sup>7</sup>) See: <http://www.freedomhouse.org/uploads/fiw/FIWAllScores.xls>

Development Report 2007/2008”<sup>8</sup>), Transparency International (such as the “TI 2005 Corruption Perceptions Index”<sup>9</sup>) and subsequent editions of the “Political Handbook of the World” (for example, Banks et al., 2006). In the Appendix, the source for every indicator is always acknowledged.

13. *The ranking scores of the Democracy Ranking 2008 of the Quality of Democracy*: In Chapter 3, the ranking scores for the comprehensive Democracy Ranking and for the individual dimensions are documented in a series of scoreboards.

## 2. References

Banks, Arthur S. / Thomas C. Muller / William R. Overstreet (eds.) (2006). Political Handbook of the World 2005-2006. Washington, D.C.: Congressional Quarterly Press (CQ Press).

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<sup>8</sup>) See:

[http://hdr.undp.org/xmlsearch/reportSearch?y=\\* &c=\\* &t=\\* &k=&orderby=year](http://hdr.undp.org/xmlsearch/reportSearch?y=* &c=* &t=* &k=&orderby=year)

<sup>9</sup>) See: [http://www.transparency.org/publications/annual\\_report](http://www.transparency.org/publications/annual_report)



### 3. Ranking Outcome of the Democracy Ranking 2008: Scoreboards

	Total Score	Rank	Total Score	Rank	Democracy Loss/Gain	Democracy Loss/Gain
	2001-2002	2001-2002	2004-2005	2004-2005	Rating	Score
Sweden	89.08	1	90.25	1	72	1.2
Norway	87.54	2	89.47	2	59	1.9
Denmark	87.42	3	88.65	3	71	1.2
Switzerland	86.55	4	87.53	4	76	1.0
Finland	85.24	5	86.61	5	70	1.4
Netherlands	84.46	6	86.06	6	63	1.6
New Zealand	83.29	8	85.09	7	60	1.8
Austria	83.34	7	84.72	8	69	1.4
Australia	82.41	9	84.37	9	58	2.0
United Kingdom	80.29	14	83.95	10	34	3.7
Germany	80.96	12	83.83	11	47	2.9
United States	81.89	10	83.42	12	64	1.5
Belgium	80.51	13	83.19	13	50	2.7
Ireland	80.13	15	82.81	14	51	2.7
Canada	81.36	11	82.27	15	79	0.9
France	78.57	16	81.36	16	49	2.8
Spain	77.60	17	81.05	17	36	3.4
Portugal	77.30	18	78.41	18	74	1.1
Italy	74.47	20	77.54	19	44	3.1
Japan	75.61	19	77.04	20	66	1.4
Slovenia	73.36	21	76.73	21	39	3.4
Israel	73.29	22	75.72	22	53	2.4
Costa Rica	70.32	24	74.79	23	25	4.5
Hungary	68.59	25	73.20	24	23	4.6
Estonia	67.53	27	73.17	25	12	5.6
Latvia	67.52	28	72.19	26	22	4.7
Czech Republic	67.14	31	71.89	27	19	4.8
Lithuania	67.33	29	71.60	28	28	4.3
Uruguay	70.44	23	71.57	29	73	1.1
Greece	67.26	30	71.51	30	29	4.2
Chile	65.62	33	70.90	31	15	5.3
Mauritius	67.84	26	70.74	32	46	2.9
Poland	66.90	32	70.71	33	33	3.8
Slovak Republic	65.34	34	70.34	34	18	5.0
Korea. Rep.	64.67	35	70.29	35	13	5.6
Argentina	59.63	41	65.63	36	10	6.0
Bulgaria	62.29	38	65.46	37	42	3.2
Panama	63.38	36	65.34	38	56	2.0
Croatia	62.51	37	64.89	39	54	2.4
Mexico	60.07	40	63.31	40	40	3.2
Peru	60.60	39	60.86	41	84	0.3

Brazil	57.55	45	60.49	42	45	2.9
South Africa	59.54	42	59.89	43	83	0.4
Ghana	52.27	58	59.46	44	6	7.2
Dominican Republic	59.50	43	59.34	45	86	-0.2
Singapore	53.61	53	58.75	46	16	5.1
El Salvador	56.47	49	58.42	47	57	2.0
Romania	57.84	44	58.31	48	82	0.5
Jamaica	57.19	47	57.71	49	81	0.5
Philippines	57.47	46	56.99	50	89	-0.5
Mongolia	53.75	51	55.93	51	55	2.2
Trinidad and Tobago	52.75	54	55.61	52	48	2.9
Mali	51.03	61	54.94	53	31	3.9
Ecuador	52.30	57	54.90	54	52	2.6
Albania	51.47	60	54.68	55	41	3.2
Namibia	52.58	56	53.97	56	68	1.4
India	52.71	55	53.80	57	75	1.1
Papua New Guinea	55.99	50	53.44	58	97	-2.6
Nicaragua	52.15	59	53.12	59	77	1.0
Colombia	49.39	63	53.00	60	35	3.6
Bolivia	56.71	48	53.00	61	98	-3.7
Botswana	53.64	52	52.89	62	91	-0.7
Sri Lanka	47.29	66	52.38	63	17	5.1
Senegal	47.21	69	51.68	64	24	4.5
Honduras	49.76	62	51.43	65	62	1.7
Ukraine	44.76	74	51.29	66	7	6.5
Macedonia. FYR	47.28	67	51.26	67	30	4.0
Paraguay	48.05	65	51.20	68	43	3.1
Benin	46.62	71	50.49	69	32	3.9
Georgia	45.44	73	49.77	70	27	4.3
Turkey	41.75	77	49.61	71	3	7.9
Indonesia	44.67	75	49.36	72	20	4.7
Moldova	49.06	64	49.00	73	85	-0.1
Madagascar	47.25	68	48.69	74	65	1.4
Malaysia	40.67	80	48.13	75	4	7.5
Venezuela. RB	45.90	72	45.06	76	93	-0.8
Guatemala	46.79	70	44.78	77	94	-2.0
Bangladesh	41.74	78	42.53	78	80	0.8
Tanzania	41.06	79	42.46	79	67	1.4
Jordan	35.87	87	42.28	80	8	6.4
Niger	34.38	89	41.70	81	5	7.3
Armenia	43.60	76	41.29	82	95	-2.3
Kenya	25.49	96	41.25	83	1	15.8
Morocco	37.55	83	41.00	84	37	3.4
Kuwait	38.13	82	39.86	85	61	1.7
Guinea-Bissau	32.66	90	38.77	86	9	6.1

Gambia. The	35.07	88	38.51	87	38	3.4
Mozambique	37.49	84	38.43	88	78	0.9
Uganda	32.46	91	38.31	89	11	5.8
Burkina Faso	38.24	81	37.52	90	90	-0.7
Malawi	37.33	85	37.11	91	87	-0.2
Sierra Leone	31.32	92	36.87	92	14	5.6
Gabon	37.10	86	34.55	93	96	-2.5
Burundi	22.07	97	32.32	94	2	10.2
Nigeria	26.55	95	31.23	95	21	4.7
Zambia	28.89	94	28.64	96	88	-0.3
Ethiopia	29.02	93	28.26	97	92	-0.8
Yemen. Rep.	21.67	98	26.05	98	26	4.4
	Green: Within the highest third of all countries	Green: Country is among the 10 best	Green: Within the highest third of all countries	Green: Country is among the 10 best	Green: Country is among the 10 best	Green: Gain of democracy score
	Blue: Within the medium third of all countries		Blue: Within the medium third of all countries			
	Red: Within the lowest third of all countries	Red: Country is among the 10 worst	Red: Within the lowest third of all countries	Red: Country is among the 10 worst	Red: Country is among the 10 worst	Red: Loss of democracy score

Political System Scores								
	2001-2002	2004-2005		2001-2002	2004-2005		2001-2002	2004-2005
Sweden	96.77	98.47	Mexico	62.35	67.59	Guatemala	41.89	36.33
Norway	96.45	97.79	Benin	60.57	66.92	Nigeria	26.49	34.93
Finland	95.60	97.44	Botswana	68.14	66.00	Bangladesh	31.85	32.91
Denmark	96.45	97.22	Dominican Republic	66.07	65.38	Uganda	22.01	32.29
Netherlands	93.67	95.22	Namibia	61.83	64.97	Gambia. The	26.66	31.62
New Zealand	93.91	94.46	Trinidad and Tobago	61.30	64.69	Jordan	19.59	30.90
Belgium	87.28	94.15	Jamaica	63.78	62.69	Zambia	31.81	30.36
Australia	92.59	93.68	Peru	62.58	62.23	Kuwait	27.30	28.83
Germany	88.73	93.04	Mongolia	60.16	61.37	Morocco	23.83	28.51
Canada	91.98	92.32	Brazil	56.77	61.18	Burundi	8.12	28.28
Austria	90.32	92.06	Senegal	53.61	60.55	Armenia	34.57	27.64
Switzerland	91.51	91.79	India	59.27	59.96	Ethiopia	27.21	25.21
United Kingdom	85.45	90.28	Romania	61.90	59.55	Gabon	31.13	24.74
Spain	85.40	89.89	Philippines	60.28	57.68	Yemen. Rep.	9.54	16.66
United States	89.12	89.66	El Salvador	55.09	57.11			
Ireland	86.72	87.99	Nicaragua	54.64	55.06			
France	83.05	86.92	Papua New Guinea	60.47	54.24	Green: Within the highest third of all countries		
Portugal	85.14	86.64	Ecuador	52.14	54.11			
Costa Rica	78.20	85.39	Macedonia. FYR	46.54	53.91			
Estonia	76.63	84.33	Bolivia	62.03	53.40			
Slovenia	78.74	82.79	Madagascar	49.62	52.62	Blue: Within the medium third of all countries		
Slovak Republic	74.09	81.24	Honduras	48.61	51.51			
Chile	72.05	81.01	Albania	47.17	50.97			
Poland	75.47	80.91	Niger	36.08	50.08			
Italy	77.00	80.88	Indonesia	42.05	49.51	Red: Within the lowest third of all countries		
South Africa	81.23	80.75	Kenya	17.87	48.81			
Hungary	72.84	79.96	Tanzania	45.68	48.57			
Czech Republic	72.42	79.81	Ukraine	36.16	47.54			
Latvia	74.13	79.45	Mozambique	46.64	47.49			
Uruguay	78.16	79.31	Sri Lanka	37.79	47.29			
Lithuania	73.09	77.78	Paraguay	41.24	46.43			
Mauritius	74.03	77.76	Turkey	34.09	45.97			
Japan	76.02	76.91	Colombia	40.50	45.41			
Israel	72.03	75.19	Moldova	45.94	45.07			
Greece	68.46	74.30	Singapore	38.01	44.85			
Bulgaria	71.58	74.25	Guinea-Bissau	31.81	43.58			
Ghana	60.76	73.15	Georgia	34.99	43.13			
Korea. Rep.	62.57	71.66	Sierra Leone	29.95	42.78			
Panama	69.35	70.28	Venezuela. RB	42.76	40.71			
Argentina	58.97	68.33	Malawi	40.54	38.63			
Mali	62.03	68.20	Malaysia	25.56	38.60			
Croatia	65.75	67.81	Burkina Faso	40.24	37.50			

Gender Equality (Socioeconomic) Scores								
	2001-2002	2004-2005		2001-2002	2004-2005		2001-2002	2004-2005
Norway	86.92	88.67	Chile	69.47	70.08	South Africa	37.31	38.08
Sweden	90.41	87.80	Bolivia	68.63	69.89	Namibia	37.44	35.24
New Zealand	84.87	87.69	Slovak Republic	68.91	69.47	Malawi	34.02	35.18
Australia	85.80	86.40	Brazil	68.14	69.17	Botswana	36.91	34.01
Finland	86.32	86.13	Costa Rica	66.94	68.98	Yemen. Rep.	29.47	33.39
Denmark	84.30	85.42	Mexico	67.09	68.80	Benin	30.45	33.13
United Kingdom	82.91	84.09	Peru	66.76	67.54	Mozambique	31.69	32.76
Slovenia	83.18	84.04	Paraguay	65.13	66.99	Burkina Faso	30.02	32.67
United States	82.82	84.00	El Salvador	63.80	66.64	Ethiopia	25.34	28.42
Canada	82.18	82.93	Jamaica	64.35	66.62	Zambia	25.84	27.22
Japan	81.79	82.85	Panama	63.68	66.49	Nigeria	24.81	25.56
Ireland	79.44	82.48	Albania	60.64	66.41	Sierra Leone	22.77	25.26
France	81.34	82.39	Mongolia	61.94	65.89	Guinea-Bissau	24.00	24.16
Netherlands	81.79	82.18	Philippines	64.69	65.74	Niger	22.08	23.55
Singapore	81.45	82.07	Colombia	63.22	65.61			
Belgium	83.15	81.53	Sri Lanka	65.82	65.37			
Estonia	78.48	81.37	Mauritius	63.61	65.32			
Switzerland	80.32	81.21	Venezuela. RB	63.99	64.85	Green: Within the highest third of all countries		
Lithuania	78.80	81.07	Trinidad and Tobago	63.11	62.94			
Germany	80.60	80.99	Honduras	61.54	62.52			
Portugal	81.02	80.71	Kuwait	59.89	61.74	Blue: Within the medium third of all countries		
Latvia	77.64	80.48	Madagascar	60.52	60.74			
Austria	80.33	80.47	Papua New Guinea	59.46	60.38			
Israel	79.54	80.06	Indonesia	56.35	58.46			
Korea. Rep.	78.11	79.24	Nicaragua	55.51	57.84	Red: Within the lowest third of all countries		
Spain	76.33	79.22	Jordan	54.48	57.76			
Italy	75.67	78.85	Turkey	56.74	56.58			
Hungary	77.15	78.83	Macedonia. FYR	58.56	56.36			
Ukraine	76.72	77.28	Bangladesh	57.20	56.33			
Greece	73.42	76.03	Guatemala	54.91	56.08			
Czech Republic	73.74	75.22	Ghana	52.09	53.41			
Poland	74.03	75.06	Tanzania	53.14	53.00			
Armenia	72.94	74.81	Dominican Republic	54.08	52.72			
Romania	73.27	74.65	India	48.49	50.40			
Argentina	72.42	74.65	Gabon	51.30	50.19			
Bulgaria	71.15	74.23	Morocco	46.75	49.40			
Croatia	70.85	73.34	Uganda	46.44	49.06			
Moldova	73.02	73.26	Gambia. The	43.10	47.40			
Uruguay	69.98	71.15	Senegal	43.20	46.08			
Ecuador	67.54	70.97	Mali	41.09	43.28			
Malaysia	68.13	70.36	Kenya	37.02	39.59			
Georgia	71.92	70.19	Burundi	36.35	38.39			

	Economy Scores							
	2001-2002	2004-2005		2001-2002	2004-2005		2001-2002	2004-2005
Norway	91.93	94.97	Argentina	41.25	48.07	Macedonia, FYR	24.77	23.12
United States	90.33	94.36	India	47.51	47.88	Burkina Faso	19.23	19.64
Ireland	86.14	91.78	Bangladesh	47.56	47.13	Benin	19.32	19.47
Switzerland	88.56	89.16	Croatia	41.90	46.90	Guinea-Bissau	18.86	19.24
Denmark	83.42	86.06	Morocco	45.41	46.61	Gambia, The	19.41	18.86
Austria	83.59	85.02	Uruguay	44.06	46.44	Niger	18.66	18.43
Netherlands	83.71	84.55	Colombia	44.63	46.38	Mozambique	15.52	17.06
United Kingdom	81.10	84.54	Philippines	45.32	45.40	Kenya	19.18	16.69
Canada	79.90	83.55	Brazil	44.09	44.86	Burundi	18.32	15.81
Australia	78.87	83.29	Guatemala	44.99	44.75	Yemen, Rep.	15.68	15.72
Sweden	79.18	82.35	Romania	37.78	44.70	Sierra Leone	19.88	15.06
Japan	78.30	81.97	Turkey	31.16	43.58	Malawi	12.57	14.70
Finland	76.12	80.53	Bulgaria	35.41	43.35	Nigeria	14.29	14.41
Belgium	77.96	80.09	Jordan	41.53	43.25	Zambia	11.99	13.59
Singapore	74.53	79.66	Sri Lanka	41.84	42.34			
Germany	77.87	78.19	Panama	39.38	42.32			
France	75.96	76.68	Moldova	43.38	41.94			
New Zealand	72.07	75.42	Peru	43.44	41.77	Green: Within the highest third of all countries		
Italy	71.90	74.03	Botswana	37.96	41.74			
Spain	70.23	72.97	Paraguay	39.98	41.65			
Kuwait	65.44	72.32	Georgia	41.28	41.39	Blue: Within the medium third of all countries		
Israel	66.92	69.55	Honduras	42.06	41.29			
Korea, Rep.	64.65	68.55	Ecuador	33.25	41.02			
Portugal	68.06	67.16	Indonesia	39.34	40.47			
Slovenia	61.39	66.94	South Africa	37.13	40.05	Red: Within the lowest third of all countries		
Czech Republic	64.01	66.50	Nicaragua	36.99	39.81			
Greece	60.80	65.02	Mongolia	39.03	39.30			
Hungary	60.68	62.96	Jamaica	38.30	38.79			
Estonia	54.83	60.00	Ghana	32.78	35.85			
Mexico	58.68	59.28	Albania	30.44	35.34			
Lithuania	52.18	58.89	Dominican Republic	39.96	34.03			
Latvia	52.51	57.72	Venezuela, RB	35.21	33.77			
Mauritius	53.56	55.05	Bolivia	33.81	32.99			
Slovak Republic	49.15	54.08	Senegal	31.32	32.12			
Malaysia	52.19	54.08	Gabon	30.98	31.80			
Costa Rica	52.80	53.18	Uganda	32.44	31.12			
Trinidad and Tobago	47.18	51.93	Tanzania	30.16	29.96			
Chile	48.77	51.57	Namibia	28.54	29.87			
Poland	47.42	50.68	Mali	28.36	29.58			
El Salvador	49.68	49.65	Ethiopia	31.22	28.50			
Papua New Guinea	47.04	49.16	Armenia	23.64	26.00			
Ukraine	46.07	48.32	Madagascar	24.36	23.16			

	Knowledge Scores							
	2001-2002	2004-2005		2001-2002	2004-2005		2001-2002	2004-2005
Sweden	87.16	87.95	Panama	34.62	36.60	Zambia	12.26	12.29
Israel	74.87	80.33	Brazil	32.06	35.94	Benin	9.40	11.80
Finland	76.55	77.45	Trinidad and Tobago	30.25	34.93	Guinea-Bissau	10.19	10.75
Denmark	72.31	76.74	Kuwait	29.95	34.52	Uganda	8.56	9.29
Switzerland	70.24	74.39	Moldova	30.73	33.93	Mali	5.63	8.74
United States	69.29	73.36	Romania	28.50	33.79	Burkina Faso	8.08	8.72
Australia	64.34	69.64	Bolivia	30.37	33.15	Malawi	8.91	8.30
Norway	63.57	68.51	Chile	30.10	33.11	Niger	8.01	8.26
United Kingdom	64.66	68.49	Mongolia	26.68	32.62	Burundi	7.83	8.14
New Zealand	63.41	67.94	El Salvador	27.28	32.42	Madagascar	7.05	6.34
Netherlands	62.55	67.60	Uruguay	29.13	32.33	Sierra Leone	14.36	6.28
Japan	61.34	65.54	Macedonia. FYR	28.08	32.12	Mozambique	4.66	5.72
Singapore	58.92	64.72	South Africa	28.44	31.84	Ethiopia	4.79	5.65
Canada	60.46	63.77	Costa Rica	25.59	30.39	Tanzania	6.33	5.26
Korea. Rep.	58.25	62.46	Georgia	27.70	29.56			
Belgium	61.82	62.35	Peru	25.97	28.53	Green: Within the highest third of all countries		
Germany	57.78	62.34	Armenia	26.70	28.43			
France	58.32	62.21	Venezuela. RB	25.97	28.37	Blue: Within the medium third of all countries		
Austria	57.37	61.17	Colombia	25.38	27.84			
Slovenia	53.61	57.73	Turkey	23.33	27.56	Red: Within the lowest third of all countries		
Italy	51.71	56.71	Mexico	24.16	27.48			
Ireland	51.22	54.95	Ecuador	23.34	26.34			
Estonia	45.71	54.10	Botswana	24.19	25.67			
Spain	49.65	53.90	Guatemala	21.55	25.44			
Greece	45.48	49.23	Philippines	21.81	25.33			
Hungary	44.06	48.30	Namibia	23.73	25.16			
Lithuania	39.40	47.73	Gabon	17.91	24.98			
Portugal	44.70	46.98	Sri Lanka	22.14	24.36			
Czech Republic	41.69	46.58	Morocco	18.95	22.39			
Croatia	39.56	44.89	Yemen. Rep.	21.79	22.26			
Jamaica	35.94	43.95	Paraguay	20.90	22.16			
Poland	39.69	43.59	Gambia. The	17.98	21.32			
Latvia	33.25	40.86	Nicaragua	17.98	20.69			
Dominican Republic	34.66	40.17	Indonesia	17.37	20.56			
Slovak Republic	33.33	39.78	Honduras	17.94	19.69			
Ukraine	36.43	39.76	India	14.66	17.21			
Jordan	36.71	39.02	Papua New Guinea	16.13	16.58			
Bulgaria	34.52	38.54	Senegal	13.22	16.12			
Malaysia	33.24	38.30	Ghana	13.84	15.83			
Argentina	34.85	38.12	Kenya	14.73	15.68			
Mauritius	32.33	37.83	Nigeria	13.56	15.32			
Albania	33.65	37.69	Bangladesh	12.89	13.21			



	Health Scores							
	2001-2002	2004-2005		2001-2002	2004-2005		2001-2002	2004-2005
Switzerland	87.43	90.37	Estonia	67.43	69.92	Kenya	26.50	28.95
Japan	87.35	88.31	Latvia	67.71	69.89	Burkina Faso	24.89	27.47
France	84.15	87.00	Mauritius	66.91	68.88	Mali	25.05	26.77
Norway	83.04	86.11	Ecuador	67.56	68.84	Tanzania	23.73	24.92
Austria	83.99	86.10	Jordan	67.18	68.46	Malawi	17.01	21.72
United States	83.80	85.78	El Salvador	67.09	68.35	Guinea-Bissau	19.60	20.94
Australia	83.68	85.70	Venezuela. RB	67.43	68.12	Ethiopia	18.87	20.12
Germany	83.95	85.56	Sri Lanka	66.43	68.05	Nigeria	19.13	20.02
Italy	83.68	85.51	Colombia	66.25	67.38	Burundi	17.82	19.64
Sweden	83.06	85.15	Georgia	66.09	67.10	Niger	16.57	18.25
Israel	83.58	83.48	Brazil	64.87	66.83	Mozambique	16.37	17.22
Canada	81.64	83.41	Romania	66.58	66.77	Zambia	11.51	13.16
Netherlands	81.07	83.37	Malaysia	65.34	66.35	Sierra Leone	10.44	11.58
Spain	80.06	83.11	Paraguay	64.66	65.32	Botswana	11.97	10.44
Greece	81.46	82.81	Turkey	63.82	65.32			
Ireland	77.77	81.94	Ukraine	64.76	64.96			
New Zealand	79.76	81.89	Moldova	62.74	64.60			
Finland	79.71	81.65	Peru	62.47	63.89	Green: Within the highest third of all countries		
Denmark	79.12	80.91	Trinidad and Tobago	63.57	63.81			
Portugal	78.08	80.79	Jamaica	62.99	62.99			
United Kingdom	77.74	80.70	Nicaragua	60.88	62.60	Blue: Within the medium third of all countries		
Slovenia	76.55	78.61	Philippines	60.17	61.79			
Czech Republic	76.24	77.53	Mongolia	59.89	61.26			
Singapore	75.33	76.41	Morocco	58.82	60.70			
Korea. Rep.	74.22	76.25	Dominican Republic	59.13	60.69	Red: Within the lowest third of all countries		
Costa Rica	74.82	75.52	Guatemala	58.14	59.97			
Argentina	73.73	74.97	Honduras	57.88	59.67			
Chile	74.13	74.74	Indonesia	56.02	58.36			
Croatia	73.77	74.71	Bolivia	51.70	53.98			
Uruguay	75.46	74.61	Bangladesh	48.91	51.60			
Belgium	82.66	74.58	India	49.18	50.12			
Slovak Republic	72.91	73.63	Yemen. Rep.	43.88	46.21			
Poland	71.85	72.84	Ghana	42.04	43.30			
Hungary	71.72	72.79	Senegal	39.01	41.33			
Kuwait	72.34	72.28	Gambia. The	38.70	41.02			
Bulgaria	70.50	71.82	Papua New Guinea	38.91	40.67			
Panama	70.76	71.45	Gabon	39.07	37.57			
Lithuania	71.47	71.38	Benin	34.81	37.06			
Albania	70.07	71.34	Madagascar	35.49	36.52			
Macedonia. FYR	70.39	71.25	Uganda	27.14	32.20			
Mexico	68.74	70.23	South Africa	30.78	30.45			
Armenia	69.36	70.15	Namibia	31.71	29.99			



Environmental Sustainability Scores								
	2001-2002	2004-2005		2001-2002	2004-2005		2001-2002	2004-2005
Mali	99.98	99.98	Mozambique	73.45	74.12	South Africa	55.54	54.75
Uganda	99.95	99.95	Ethiopia	74.00	73.88	Czech Republic	53.64	54.03
Burundi	99.75	99.77	Georgia	72.39	73.83	Mongolia	49.11	53.42
Burkina Faso	98.99	99.23	Honduras	75.13	73.56	Finland	55.68	53.16
Gambia. The	98.24	98.36	Turkey	72.04	73.24	Venezuela. RB	52.59	51.94
Malawi	98.09	98.09	Bolivia	72.39	72.96	Jamaica	51.40	51.33
Niger	98.05	98.06	India	70.91	72.60	Moldova	51.04	50.94
Madagascar	96.96	97.08	Spain	72.75	71.86	Australia	48.52	50.24
Sierra Leone	95.93	96.62	Ecuador	70.58	71.28	United States	47.06	48.43
Papua New Guinea	96.01	96.38	Denmark	72.82	71.26	Canada	49.51	47.44
Colombia	91.94	95.72	France	70.66	70.72	Ukraine	42.79	44.88
Peru	94.40	95.69	Greece	69.16	70.49	Estonia	45.65	44.64
Guinea-Bissau	94.92	94.70	United Kingdom	69.21	70.26	Trinidad and Tobago	16.86	19.08
Namibia	95.25	94.62	Croatia	70.31	70.04	Kuwait	17.23	13.56
Uruguay	94.91	94.61	Mexico	70.23	69.37			
Costa Rica	92.06	92.88	Hungary	68.10	69.30			
Bangladesh	91.62	92.50	Benin	69.36	68.81	Green: Within the highest third of all countries		
Mauritius	91.82	91.54	Tanzania	68.82	68.60			
Morocco	86.46	88.35	Zambia	68.23	68.34			
Sri Lanka	87.73	87.23	Indonesia	67.33	68.27	Blue: Within the medium third of all countries		
Botswana	84.69	87.05	Lithuania	65.98	68.00			
Panama	78.66	85.13	Israel	67.90	67.83			
Paraguay	83.64	83.73	Kenya	68.18	67.53	Red: Within the lowest third of all countries		
Philippines	81.35	83.21	Norway	67.67	67.50			
Brazil	82.44	82.19	Japan	67.26	67.14			
El Salvador	81.40	81.63	Sweden	67.12	66.88			
Switzerland	81.39	81.28	Netherlands	67.07	66.79			
Albania	84.09	81.21	Slovenia	65.15	66.07			
Ghana	78.13	80.50	Germany	65.69	66.02			
Guatemala	78.90	79.97	New Zealand	63.28	65.71			
Dominican Republic	76.78	78.87	Romania	62.81	65.42			
Argentina	79.23	78.84	Belgium	63.09	62.61			
Senegal	77.25	78.41	Nigeria	61.26	62.37			
Gabon	76.10	77.27	Singapore	55.78	60.44			
Ireland	73.13	77.01	Poland	58.61	60.38			
Italy	76.77	75.83	Slovak Republic	58.67	60.26			
Latvia	73.44	75.70	Macedonia. FYR	58.34	60.23			
Armenia	70.50	75.28	Jordan	60.91	59.75			
Portugal	75.44	75.21	Yemen. Rep.	58.12	59.57			
Nicaragua	77.00	75.02	Malaysia	60.04	59.24			
Chile	73.45	74.48	Korea. Rep.	58.60	58.10			
Austria	76.49	74.19	Bulgaria	53.40	55.40			

	Gender Comprehensive Scores							
	2001-2002	2004-2005		2001-2002	2004-2005		2001-2002	2004-2005
Norway	91.58	93.46	Peru	65.00	65.41	Mozambique	40.03	40.96
Sweden	93.45	93.41	Brazil	60.68	64.63	Gambia. The	34.28	40.37
Finland	90.14	91.26	Trinidad and Tobago	61.16	63.77	Morocco	32.29	37.55
Denmark	89.73	90.87	Ukraine	55.89	63.27	Niger	26.83	36.61
New Zealand	87.86	89.80	Mongolia	60.07	63.11	Gabon	38.88	36.24
Australia	88.15	89.73	Ecuador	59.49	62.70	Malawi	36.63	35.44
Netherlands	87.38	88.63	El Salvador	59.70	62.66	Sierra Leone	26.33	35.30
Belgium	84.54	88.34	Ghana	55.89	62.42	Burundi	21.45	33.59
Germany	84.98	87.71	Philippines	62.31	61.94	Burkina Faso	32.54	32.36
Canada	86.24	87.36	Bolivia	64.81	61.18	Guinea-Bissau	24.51	31.73
Austria	85.47	86.75	Albania	55.03	60.45	Zambia	28.34	31.21
United Kingdom	82.34	86.18	Moldova	59.95	60.40	Nigeria	24.31	29.38
United States	85.05	86.08	Dominican Republic	60.07	60.07	Ethiopia	25.21	26.75
Spain	80.58	85.24	Singapore	53.01	58.66	Yemen. Rep.	13.29	20.27
Switzerland	84.38	84.77	South Africa	57.13	57.77			
Ireland	82.08	84.20	Paraguay	53.03	57.41			
France	81.37	83.86	Honduras	53.70	57.41	Green: Within the highest third of all countries		
Portugal	82.46	83.16	Georgia	52.97	57.34			
Slovenia	80.02	82.54	Nicaragua	55.20	57.29			
Estonia	76.50	82.22	Madagascar	54.50	56.91	Blue: Within the medium third of all countries		
Italy	75.77	80.98	Macedonia. FYR	51.85	56.55			
Latvia	76.07	80.31	Indonesia	50.89	56.03			
Costa Rica	72.83	79.26	Papua New Guinea	59.29	55.78	Red: Within the lowest third of all countries		
Lithuania	74.52	79.21	Colombia	51.32	55.53			
Poland	74.60	79.08	Mali	50.28	55.34			
Czech Republic	73.86	78.94	Malaysia	47.97	55.21			
Hungary	73.81	78.85	India	54.03	55.17			
Japan	76.36	77.44	Senegal	48.77	54.98			
Israel	73.88	76.86	Sri Lanka	49.12	54.53			
Slovak Republic	71.92	76.32	Venezuela. RB	51.69	54.05			
Argentina	66.45	75.76	Tanzania	50.64	52.27			
Bulgaria	71.72	75.76	Armenia	54.75	52.15			
Greece	70.30	75.35	Namibia	49.97	51.75			
Korea. Rep.	68.20	74.66	Benin	44.55	50.05			
Uruguay	73.86	74.48	Botswana	52.41	49.65			
Chile	67.59	73.73	Turkey	42.54	49.27			
Croatia	69.00	71.75	Guatemala	48.40	47.27			
Mauritius	67.48	71.64	Kenya	29.27	45.37			
Panama	66.42	69.92	Jordan	36.52	44.72			
Mexico	65.30	69.51	Bangladesh	43.81	44.46			
Romania	67.88	67.77	Kuwait	42.91	43.91			
Jamaica	64.01	66.97	Uganda	34.34	41.71			

## **4. Appendix: Overview and Definition of the Indicators Assigned per Dimension for the Democracy Ranking 2008<sup>10</sup>**

### **4.1 Dimension of Politics (Political System): Definition of Assigned Indicators<sup>11</sup>**

**P1:** Political rights: Freedom House (minimum = 100, maximum = 1), source: Freedom House (<http://www.freedomhouse.org/uploads/fiw/FIWAllScores.xls>).

**P2:** Civil liberties: Freedom House (minimum = 100, maximum = 1), source: Freedom House (<http://www.freedomhouse.org/uploads/fiw/FIWAllScores.xls>).

**P3:** Gender Empowerment Measure/GEM (UNDP HDI) (minimum = 1, maximum = 100), source: United Nations Development Program (Human Development Report Office) ([http://hdr.undp.org/xmlsearch/reportSearch?y=\\*&c=\\*&t=\\*&k=&orderby=year](http://hdr.undp.org/xmlsearch/reportSearch?y=*&c=*&t=*&k=&orderby=year)). Comment: For the year 2001 was taken the “Human Development Report 2003”, for 2002 the “Human Development Report 2004”, for 2004 the “Human Development Report 2006”, and for 2005 the “Human Development Report 2007/2008”. The reason for this is that there exists at

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<sup>10</sup>) We want to acknowledge all organizations that provided the sources, from which indicators were taken to input the quantitative model of the Democracy Ranking 2008. Without these fine sources, the computation of this democracy ranking would not have been possible. That these organizations make their data sources public and transparent, and thus globally available to all communities, demonstrates mature responsibility and leadership.

<sup>11</sup>) In case of missing values, for the political dimension, the year 2000 did not serve as an estimator for 2001-2002 and 2003 was not used as an estimator for 2004-2005. Missing values thus were treated differently for the political and the five non-political dimensions. Reasoning for this was pragmatic; because of the data structure of the used sources, missing values for politics for 2001-2002 and 2004-2005 mostly implied that data for 2000 and 2003 also were not available. There is a tendency for political indicators to cover more countries with every new year.

least a two-year time lag of the most recently available data for 3 of the 4 key indicators of GEM when compared with the release date of the report.

**P4:** Seats in parliament held by women (UNDP HDI) (minimum = 1, maximum = 100), source: United Nations Development Program (Human Development Report Office) ([http://hdr.undp.org/xmlsearch/reportSearch?y=\\*&c=\\*&t=\\*&k=&orderby=year](http://hdr.undp.org/xmlsearch/reportSearch?y=*&c=*&t=*&k=&orderby=year)). Comment: For the year 2001 was taken the “Human Development Report 2001”, for 2002 the “Human Development Report 2002”, for 2004 the “Human Development Report 2004”, and for 2005 the “Human Development Report 2005”.

**P5:** Press Freedom: Freedom House (minimum = 100, maximum = 1), source: Freedom House (<http://www.freedomhouse.org/uploads/fop/historical/SSGlobal.xls>).

**P6:** Corruption Perceptions Index: Transparency International (minimum = 1, maximum = 100), source: Transparency International ([http://www.transparency.org/publications/annual\\_report](http://www.transparency.org/publications/annual_report)). Comment: For the year 2001 was taken the “TI 2001 Corruption Perceptions Index”, for 2002 the “TI 2002 Corruption Perceptions Index”, for 2004 the “TI 2004 Corruption Perceptions Index”, and for 2005 the “TI 2005 Corruption Perceptions Index”.

**P7:** Change of the head of government (last 13 years) (minimum = no = 1, maximum = yes = 100), source: successive volumes of “Political Handbook of the World” (for example: Banks, Arthur S. / Thomas C. Muller / William R. Overstreet [eds.] [2006]. Political Handbook of the World 2005-2006. Washington, D.C.: Congressional Quarterly Press). Comment: As benchmarks served the years 2002 and 2005, thus reference was made to the two periods 1990-2002 and 1993-2005. In case of no change (“no”), the value “1” was assigned; in case of change (“yes”) the value “100”. Because of interpretation ambiguities, Bosnia and Herzegovina and Serbia and Montenegro were omitted.

**P8:** Party change of the head of government (last 13 years) (last 13 years) (minimum = no = 1, maximum = yes = 100), source: successive volumes of “Political Handbook of the World” (for example: Banks, Arthur S. / Thomas C. Muller / William R. Overstreet [eds.] [2006]. Political Handbook of the World 2005-2006. Washington, D.C.: Congressional Quarterly Press). Comment: As benchmarks served the years 2002 and 2005, thus reference was made to the two periods 1990-2002 and 1993-2005. In case of no change (“no”), the value “1” was assigned; in case of change (“yes”) the value “100”. Changes to or from “non-party heads or independents” to or from “party-based heads of government” were interpreted with the value “50”. Because of interpretation ambiguities, Armenia and Georgia were omitted.<sup>12</sup>

Weighting of the indicators in context of the dimension of politics (political system): The following weight measures are assigned; P1 = 25%, P2 = 25%, P3 = 20%, P4 = 5%, P5 = 10%, P6 = 10%, P7 = 2.5%, and P8 = 2.5%.

#### **4.2 Dimension of Gender (Socioeconomic Gender Equality): Definition of Assigned Indicators**

**SEGE1:** Labor force, female (% of total labor force) (minimum = 1, maximum = 100).

**SEGE2:** Unemployment, female (% of female labor force) (minimum = 100, maximum = 1).

**SEGE3:** Primary education, pupils (% female) (minimum = 1, maximum = 100).

**SEGE4:** School enrollment, secondary, female (% gross) (minimum = 1, maximum = 100).

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<sup>12</sup>) In the data files thus the “missing values” rule was applied to Armenia and Georgia (see paragraph 10 in Chapter 1).

**SEGE5:** School enrollment, secondary, female (% net) (minimum = 1, maximum = 100).

**SEGE6:** School enrollment, tertiary, female (% gross) (minimum = 1, maximum = 100).

**SEGE7:** Life expectancy at birth, female (years) (minimum = 1, maximum = 100).

Source for all indicators of the dimension of gender (socioeconomic gender equality): World Bank (2007). World Development Indicators '07 (CD-ROM). Washington DC: World Bank.

Weighting of the indicators in context of the dimension of gender (socioeconomic gender equality): The following weight measures are assigned to three clusters of indicators; “labor force” (SEGE1-SEGE2) = 33.33%, “education” (SEGE3-SEGE6) = 33.33%, and “life expectancy” (SEGE7) = 33.33%. Within these three clusters, no indicator-specific weighting is being applied to the indicators.

#### **4.3 Dimension of the Economy (Economic System): Definition of Assigned Indicators**

**E1:** GDP per capita, PPP (constant 2000 international \$) (minimum = 1, maximum = 100).

**E2:** GDP per capita, PPP (current international \$) (minimum = 1, maximum = 100).

**E3:** Central government debt, total (% of GDP) (minimum = 100, maximum = 1).

**E4:** Inflation, consumer prices (annual %) (minimum = 100, maximum = 1).

**E5:** Unemployment, total (% of total labor force) (minimum = 100, maximum = 1).

**E6:** Unemployment, youth total (% of total labor force ages 15-24) (minimum = 100, maximum = 1).

Source for all indicators of the dimension of the economy (economic system): World Bank (2007). World Development Indicators '07 (CD-ROM). Washington DC: World Bank.

Weighting of the indicators in context of the dimension of the economy (economic system): The following weight measures are assigned; E1 = 25%, E2 = 25%, and all the other indicators (E3-E6) are weighted equally with 12.5%.

#### **4.4 Dimension of Knowledge (Knowledge-Based Information Society, Education and Research): Definition of Assigned Indicators**

**K1:** School enrollment, secondary (% gross) (minimum = 1, maximum = 100).

**K2:** School enrollment, secondary (% net) (minimum = 1, maximum = 100).

**K3:** School enrollment, tertiary (% gross) (minimum = 1, maximum = 100).

**K4:** Pupil-teacher ratio, primary (minimum = 100, maximum = 1).

**K5:** Telephone mainlines (per 1,000 people) (minimum = 1, maximum = 100).

**K6:** Personal computers (per 1,000 people) (minimum = 1, maximum = 100).

**K7:** Internet users (per 1,000 people) (minimum = 1, maximum = 100).

**K8:** Mobile phone subscribers (per 1,000 people) (minimum = 1, maximum = 100).

**K9:** Information and communication technology expenditure (% of GDP) (minimum = 1, maximum = 100).

**K10:** Research and development expenditure (% of GDP) (minimum = 1, maximum = 100).

**K11:** Scientific and technical journal articles (per 1,000 people) (minimum = 1, maximum = 100).

Source for all indicators of the dimension of knowledge (knowledge-based information society, education and research): World Bank (2007). World Development Indicators '07 (CD-ROM). Washington DC: World Bank.

Weighting of the indicators in context of the dimension of knowledge (knowledge-based information society, education and research): The following weight measures are assigned to three clusters of indicators; “education” (K1-K4) = 33.33%, “technology” (K5-K9) = 33.33%, and “research” (K10-K11) = 33.33%. Within these three clusters, no indicator-specific weighting is being applied to the indicators.

#### **4.5 Dimension of Health (Health Status and Health System): Definition of Assigned Indicators**

**H1:** Life expectancy at birth, total (years) (minimum = 1, maximum = 100).



**H2:** Health expenditure per capita (current US\$) (minimum = 1, maximum = 100).

**H3:** Health expenditure, public (% of GDP) (minimum = 1, maximum = 100).

**H4:** Health expenditure, private (% of GDP) (minimum = 1, maximum = 100).

**H5:** Hospital beds (per 1,000 people) (minimum = 1, maximum = 100).

**H6:** Physicians (per 1,000 people) (minimum = 1, maximum = 100).

**H7:** Mortality rate, infant (per 1,000 live births) (minimum = 100, maximum = 1).

**H8:** Mortality rate, under-5 (per 1,000) (minimum = 100, maximum = 1).

Source for all indicators of the dimension of health (health status and health system): World Bank (2007). World Development Indicators '07 (CD-ROM). Washington DC: World Bank.

Weighting of the indicators in context of the dimension of health (health status and health system): The following weight measures are assigned; H1 = 65%, and all the other indicators (H2-H8) are weighted equally with 5%.

#### **4.6 Dimension of the Environment (Environmental Sustainability): Definition of Assigned Indicators**

**EN1:** CO2 emissions (kg per 2000 PPP \$ of GDP) (minimum = 100, maximum = 1).

**EN2:** CO2 emissions (metric tons per capita) (minimum = 100, maximum = 1).

**EN3:** GDP per unit of energy use (constant 2000 PPP \$ per kg of oil equivalent) (minimum = 1, maximum = 100).

**EN4:** Electric power consumption (kWh per capita) (minimum = 100, maximum = 1).

**EN5:** Electricity production from hydroelectric sources (% of total) (minimum = 1, maximum = 100).

Source for all indicators of the dimension of the environment (environmental sustainability): World Bank (2007). World Development Indicators '07 (CD-ROM). Washington DC: World Bank.

Weighting of the indicators in context of the environment (environmental sustainability): The following weight measures are assigned; EN1 = 30%, EN2 = 30%, EN3 = 30%, EN4 = 5%, and EN5 = 5%.

#### **4.7 Dimension of Gender “Comprehensive”: Definition of Assigned Indicators**

For the conceptual and methodic design of a comprehensive gender dimension, see again paragraph 11 in Chapter 1.