

# Economic system survey

Outlines:

- Basic concepts
- Main measurements in use (global and local level)
- Some experiences around the World
- Conclusions

## Basic concepts

### GDP - 1937

Simon Kuznets, an economist at the National Bureau of Economic Research, presents the original formulation of gross domestic product in his report to the U.S. Congress, "National Income, 1929-35." His idea is to capture all economic production by individuals, companies, and the government in a single measure, which should rise in good times and fall in bad. GDP is born.



# Basic concepts

GDP is not adequate?



## Basic concepts

From GDP to:

**GDP at Purchasing Power Parity - PPP**

Adjustment of GDP with local currency prices and cost of local services

**Physical Quality of Life Index – PQLI (M.D. Morris, '70s)**

GDP + life expectancy + literacy + infant mortality

**Measure of Economic Welfare – MEW (W. D. Nordhaus & J. Tobin, 1972)**

GDP with non market economy (entertainments, family services...)

**Genuine Progress Indicator – GPI**

**Human Development Index – HDI (UN, from '90s)**

Composite indicator

**Commission on the Measurement of Economic Performance and Social Progress – CMEPSP**

....

## Basic concepts



### Welfare economics:

Branch of economic studies to evaluate wellbeing at an aggregate level.

### Amartya Sen and the capabilities approach:

1. The importance of real freedoms in the assessment of a person's advantage
2. Individual differences in the ability to transform resources into valuable activities
3. The multi-variate nature of activities giving rise to happiness
4. A balance of materialistic and nonmaterialistic factors in evaluating human welfare
5. Concern for the distribution of opportunities within society.

**Definition of wellbeing**

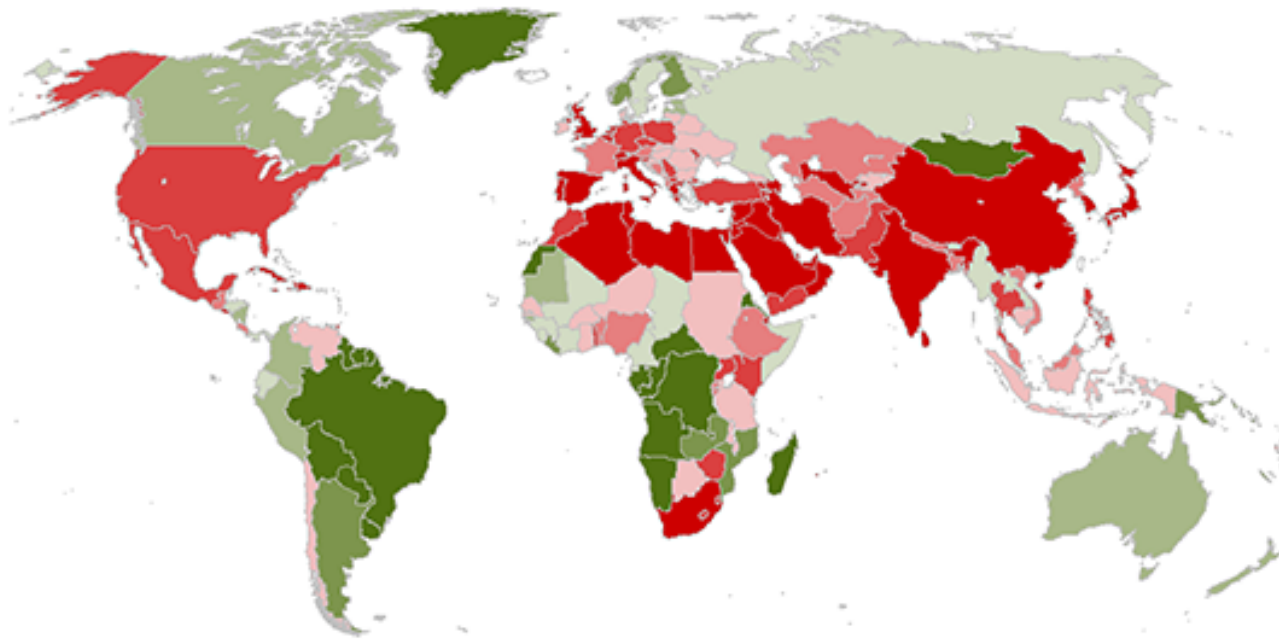
**Definition of appropriate measurements**

**Types of measurements:** subjective and objective

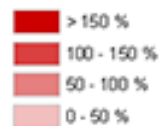
# Economic system measurements (habitat)

## Landscape and natural resources

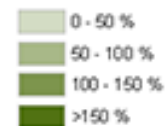
**Ecological footprint**: provide comprehensive data on humanity's demand on nature



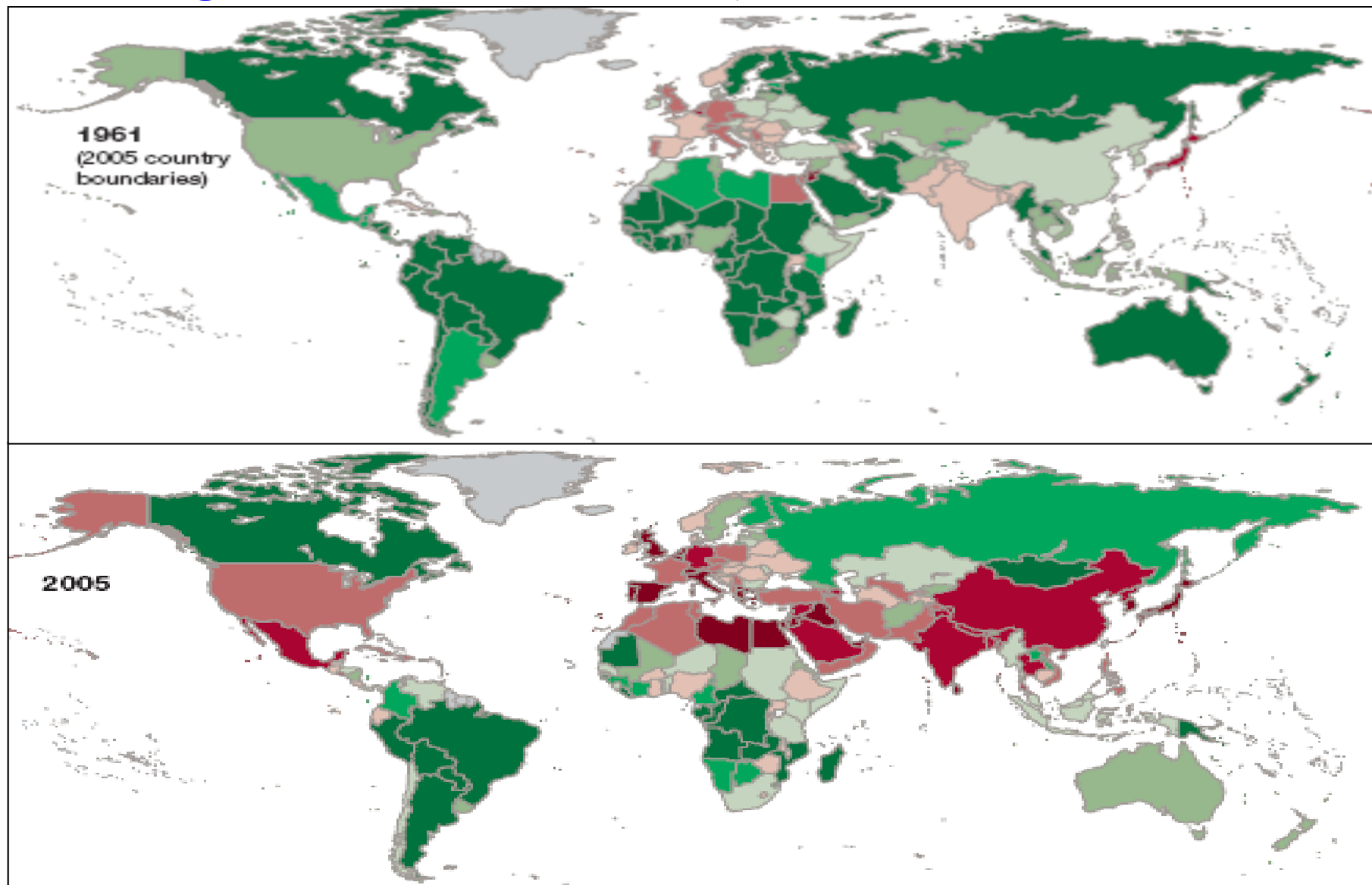
Ecological Footprint of consumption exceeds biocapacity



Biocapacity exceeds Ecological Footprint of consumption



# Ecological creditors and debtors, 1961 - 2005



Eco-debt: Footprint relative to biocapacity ■ more than 150% greater ■ 100-150% greater ■ 50-100% greater ■ 0-50% greater ■ Insufficient data

Eco-credit: Biocapacity relative to footprint ■ 0-50% greater ■ 50-100% greater ■ 100-150% greater ■ more than 150% greater

Source: Global Footprint Network, 2009

## Economic system measurements (habitat)

### Competitiveness and eco-innovation

**Table 4.2** Competitiveness and stringency of environmental policies and eco-innovation, by country

Country	Global Competitiveness Index (2015/2016) (*)	Stringency of environmental policies (2012) (°)	Eco-innovation scoreboard (2013) — EU-wide ranking
Switzerland	1	5	N.A.
Germany	4	10	3
Netherlands	5	2	13
Finland	8	3	1
Sweden	9	9	1
United Kingdom	10	4	5
Norway	11	6	N.A.
Denmark	12	1	4
Belgium	19	20	10
Luxembourg	20	N.A.	7
France	22	7	8
Austria	23	13	9
Ireland	24	26	11
Estonia	30	N.A.	16
Czech Republic	31	21	17
Spain	33	23	6
Lithuania	36	N.A.	20
Portugal	38	25	14
Poland	41	11	27
Italy	43	15	11
Latvia	44	N.A.	24
Malta	48	N.A.	18
Turkey	51	27	N.A.
Romania	53	N.A.	21
Bulgaria	54	N.A.	28
Slovenia	59	22	15
Hungary	63	18	22
Cyprus	65	N.A.	26
Slovakia	67	12	25
Croatia	77	N.A.	23
Greece	81	24	19



# Economic system measurements (habitat)

## Environmental Performance Index

### 2016 EPI Rankings

Rank	Country	Score	Peer Comp.*
1	Finland	90.68	↑
2	Iceland	90.51	↑
3	Sweden	90.43	↑
4	Denmark	89.21	↑
5	Slovenia	88.98	↑
6	Spain	88.91	↑
7	Portugal	88.63	↑
8	Estonia	88.59	↑
9	Malta	88.48	↑
10	France	88.2	↑
11	New Zealand	88	↑
12	United Kingdom	87.38	↑
13	Australia	87.22	↑
14	Singapore	87.04	↑
15	Croatia	86.98	↑
16	Switzerland	86.93	↑
17	Norway	86.9	↑
18	Austria	86.64	↑
19	Ireland	86.6	↑
20	Luxembourg	86.58	↑
21	Greece	85.81	↓
22	Latvia	85.71	↓
23	Lithuania	85.49	↓
24	Slovakia	85.42	↓
25	Canada	85.06	↑
26	United States of America	84.72	↓
27	Czech Republic	84.67	↓
28	Hungary	84.6	↓
29	Italy	84.48	↓
30	Germany	84.26	↓

Rank	Country	Score	Peer Comp.*
31	Azerbaijan	83.78	↑
32	Russia	83.52	↑
33	Bulgaria	83.4	↓
34	Romania	83.24	↓
35	Belarus	82.3	↑
36	Netherlands	82.03	↓
37	Armenia	81.6	↑
38	Poland	81.26	↓
39	Japan	80.59	↑
40	Cyprus	80.24	↓
41	Belgium	80.15	↓
42	Costa Rica	80.03	↑
43	Argentina	79.84	↑
44	Ukraine	79.69	↑
45	Cuba	79.04	↑
46	Brazil	78.9	↑
47	Montenegro	78.89	↓
48	Serbia	78.67	↑
49	Israel	78.14	↑
50	Macedonia	78.02	↑
51	Panama	78	↑
52	Chile	77.67	↑
53	Tunisia	77.28	↑
54	Jamaica	77.02	↑
55	Moldova	76.69	↑
56	Venezuela	76.23	↑
57	Colombia	75.93	↑
58	Dominican Republic	75.32	↑
59	Fiji	75.29	↑
60	Taiwan	74.88	↑

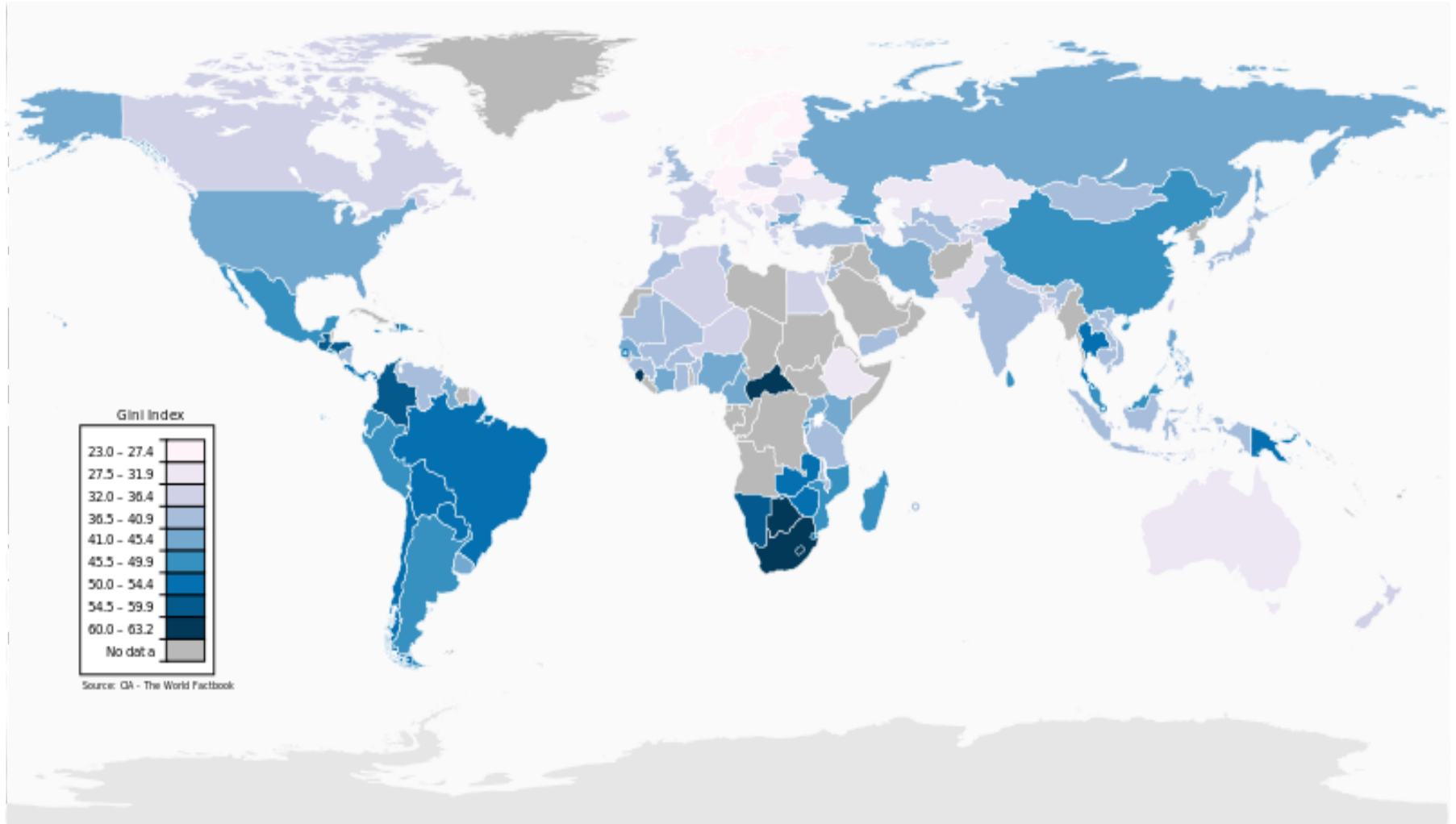
Rank	Country	Score	Peer Comp.*
61	Albania	74.38	↓
62	Trinidad and Tobago	74.34	↑
63	Malaysia	74.23	↑
64	Morocco	74.18	↑
65	Uruguay	73.98	↑
66	Philippines	73.7	↑
67	Mexico	73.59	↑
68	Belize	73.55	↑
69	Kazakhstan	73.29	↓
70	Dominica	73.25	↑
71	Kyrgyz Republic	73.13	↓
72	Tajikistan	73.05	↓
73	Peru	72.95	↑
74	Jordan	72.24	↑
75	Guyana	71.14	↑
76	Bolivia	71.09	↑
77	Mauritius	70.85	↑
78	Namibia	70.84	↑
79	Botswana	70.72	↑
80	South Korea	70.61	↑
81	South Africa	70.52	↑
82	Paraguay	70.36	↓
83	Algeria	70.28	↑
84	Turkmenistan	70.24	↓
85	Samoa	70.2	↑
86	Bahrain	70.07	↑
87	Qatar	69.94	↑
88	Honduras	69.64	↓
88	Guatemala	69.64	↓
90	Equatorial Guinea	69.59	↑

\* The Peer Comparison column identifies whether a country performs better or worse than countries in its region.

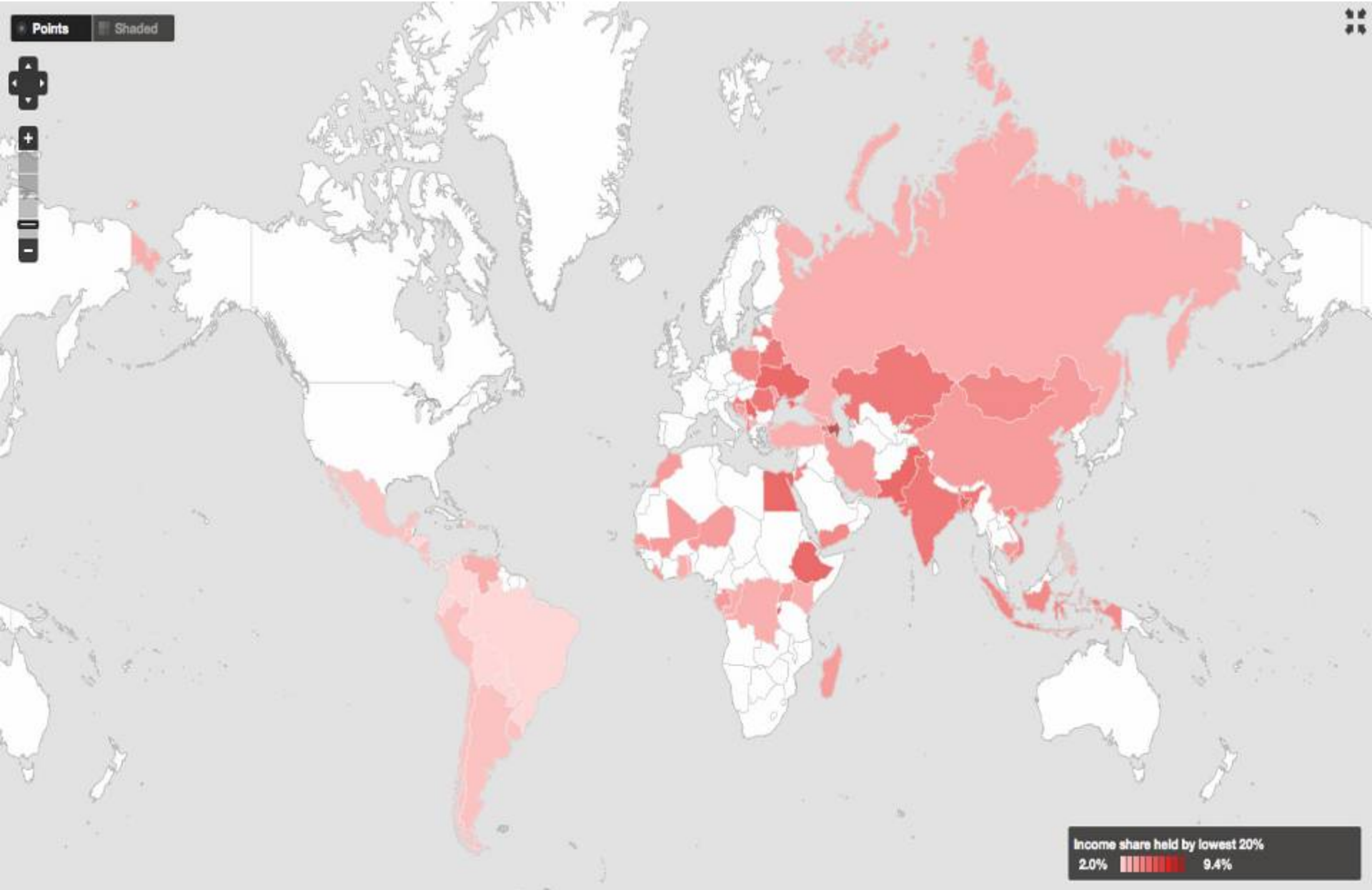
# Economic system measurements (economy)

Economic and financial viability

Gini Coefficient



# Income share held by lowest 20%, 2010



Source: World Bank, 2011

# Income share held by highest 20%, 2010



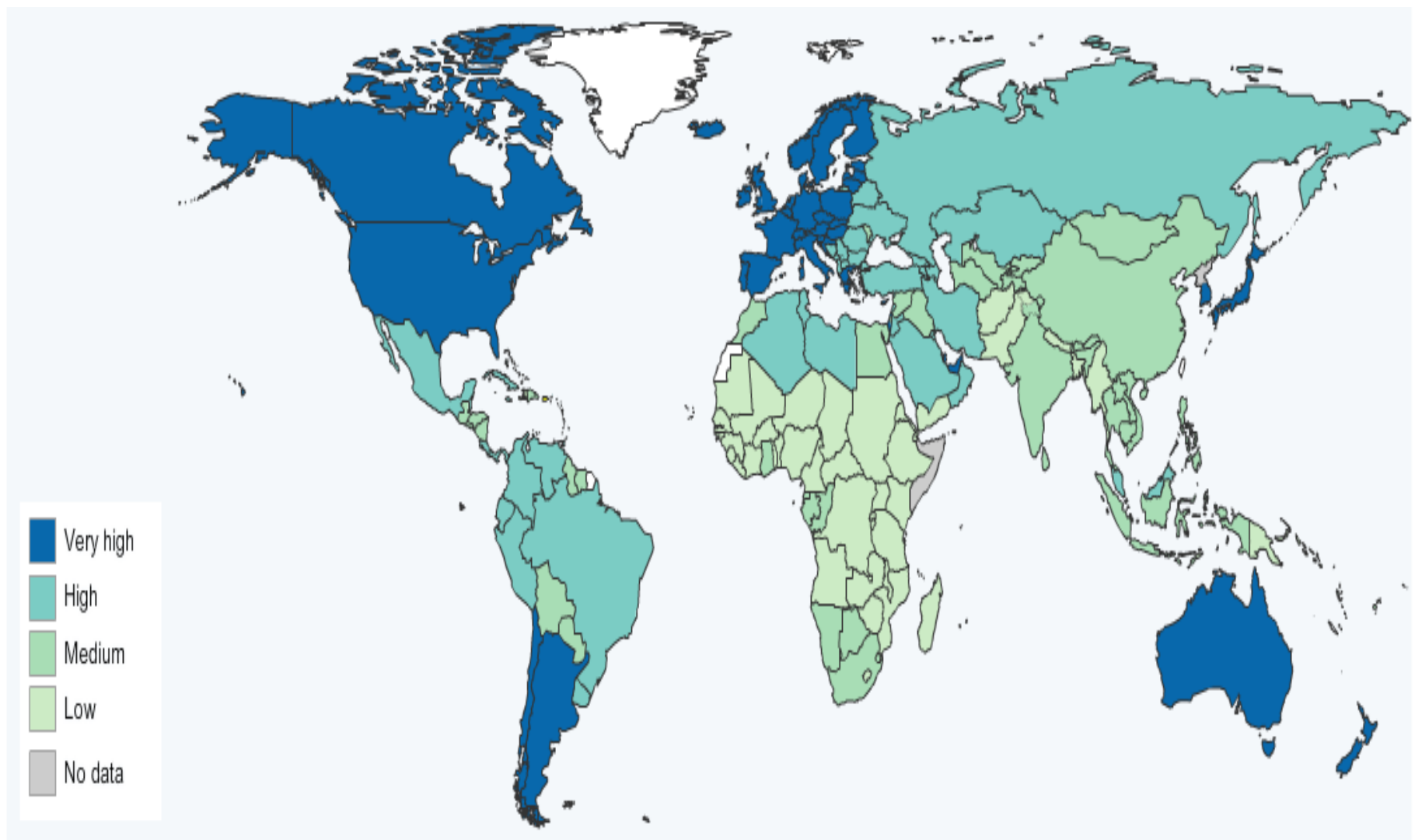
Source: World Bank, 2011

# Human Development Index (HDI)

[www.hdr.undp.org/en/content/human-development-index-hdi](http://www.hdr.undp.org/en/content/human-development-index-hdi)

The **Human Development Index (HDI)** is a composite statistic used to rank countries by level of "human development" and separate "very high human development", "high human development", "medium human development", and "low human development" countries. The Human Development Index (HDI) is a comparative measure of life expectancy, literacy, education and standards of living for countries worldwide. It is a standard means of measuring well-being, especially child welfare. It is used to distinguish whether the country is a developed, a developing or an under-developed country, and also to measure the impact of economic policies on quality of life. There are also HDI for states, cities, villages, etc. by local organizations or companies.

## Human Development Index (HDI) value, 2011



Source: United Nations Development Programme (UNDP), 2011

# Competitiveness INDEX

First 30

	Economy	Score <sup>1</sup>	Prev. <sup>2</sup>	Trend <sup>3</sup>
1	Switzerland	5.81	1	
2	Singapore	5.72	2	
3	United States	5.70	3	
4	Netherlands	5.57	5	
5	Germany	5.57	4	
6	Sweden	5.53	9	
7	United Kingdom	5.49	10	
8	Japan	5.48	6	
9	Hong Kong SAR	5.48	7	
10	Finland	5.44	8	
11	Norway	5.44	11	
12	Denmark	5.35	12	
13	New Zealand	5.31	16	
14	Taiwan, China	5.28	15	
16	Canada	5.27	13	
16	United Arab Emirates	5.26	17	
17	Belgium	5.25	19	
18	Qatar	5.23	14	
19	Austria	5.22	23	
20	Luxembourg	5.20	20	
21	France	5.20	22	
22	Australia	5.19	21	
23	Ireland	5.18	24	
24	Israel	5.18	27	
25	Malaysia	5.16	18	
26	Korea, Rep.	5.03	26	
27	Iceland	4.96	29	
28	China	4.95	28	
29	Saudi Arabia	4.84	25	
30	Estonia	4.78	30	

Last 30

100	Ethiopia	3.77	109	
110	Cape Verde	3.76	112	
111	Kyrgyz Republic	3.75	102	
112	Senegal	3.74	110	
113	Uganda	3.69	115	
114	Ghana	3.68	119	
115	Egypt	3.67	116	
116	Tanzania	3.67	120	
117	Paraguay	3.65	118	
118	Zambia	3.60	96	
119	Cameroon	3.58	114	
120	Lesotho	3.57	113	
121	Bolivia	3.54	117	
122	Pakistan	3.49	126	
123	Gambia, The	3.47	123	
124	Benin	3.47	122	
125	Mali	3.46	127	
126	Zimbabwe	3.41	125	
127	Nigeria	3.39	124	
128	Madagascar	3.33	130	
129	Congo, Democratic Rep.	3.29	n/a	
130	Venezuela	3.27	132	
131	Liberia	3.21	129	
132	Sierra Leone	3.16	137	
133	Mozambique	3.13	133	
134	Malawi	3.08	135	
135	Burundi	3.06	136	
136	Chad	2.95	139	
137	Mauritania	2.94	138	
138	Yemen	2.74	n/a	

# Big Mac Index

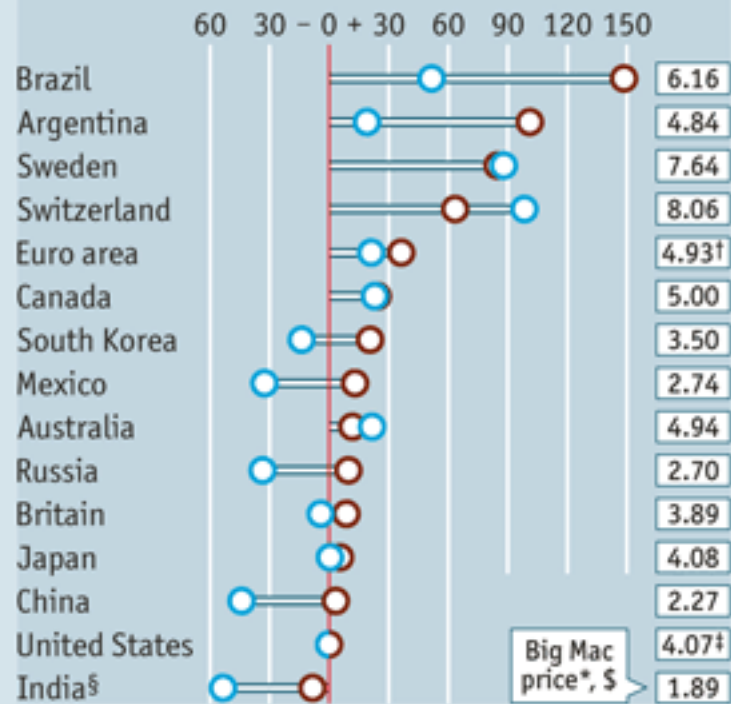
## Our new improved recipe

Big Mac prices v GDP per person, July 2011



Big Mac index, local currency under(-)/over(+) valuation against the dollar, %

○ Raw index    ○ Adjusted for GDP per person



\*At market exchange rate (July 25th) †Average of member countries

‡Average of four cities §Maharaja Mac

Sources: McDonald's; IMF; The Economist



## Economic system measurements (society)

Social security and individual welfare

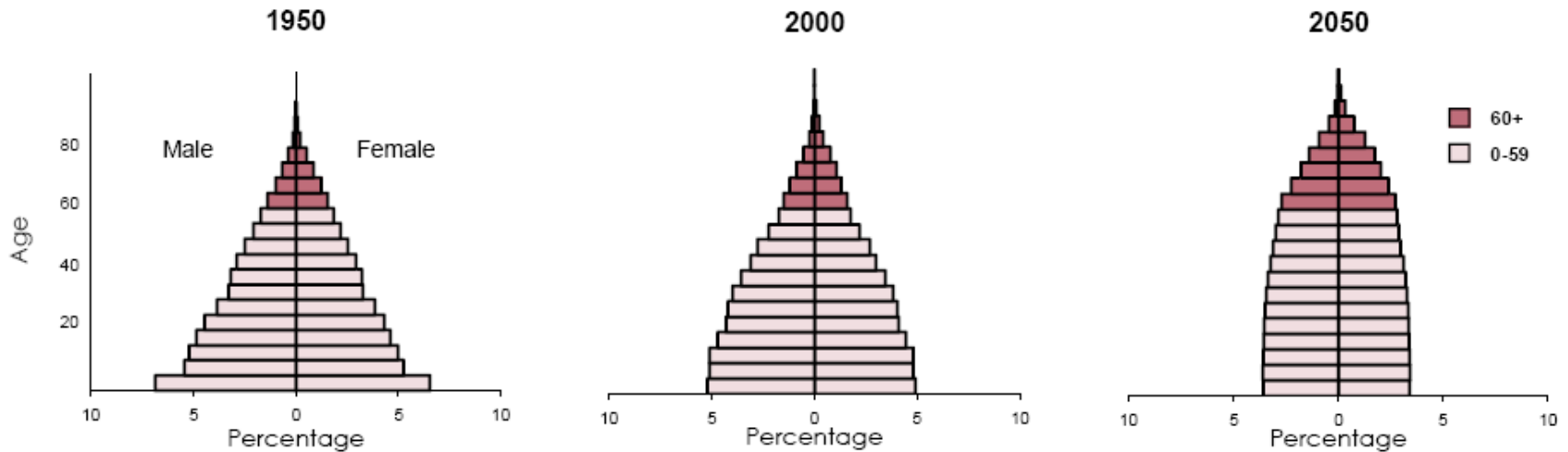
Criminality, migration, urban/rural population, ageing process...

[Happy Planet Index](#)

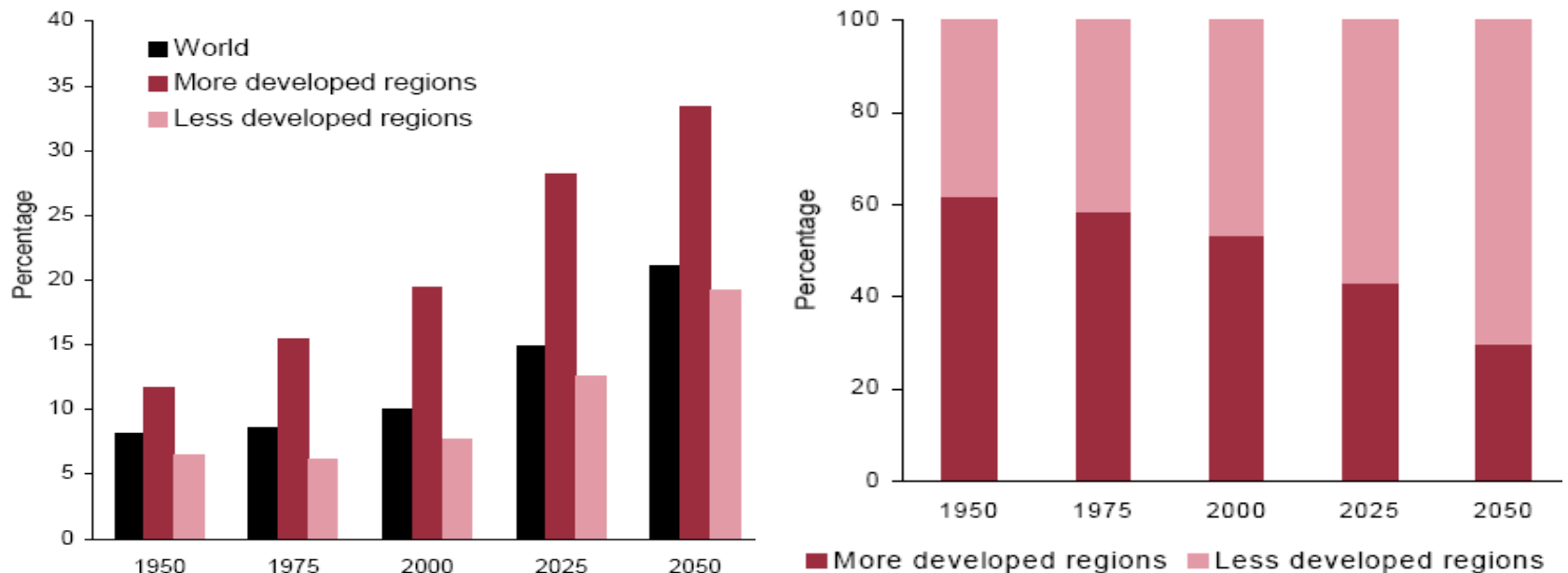
[Genuine Progress Indicator](#)

Some maps from “[Le Monde Diplomatique](#)”

# Population ageing: global population pyramids



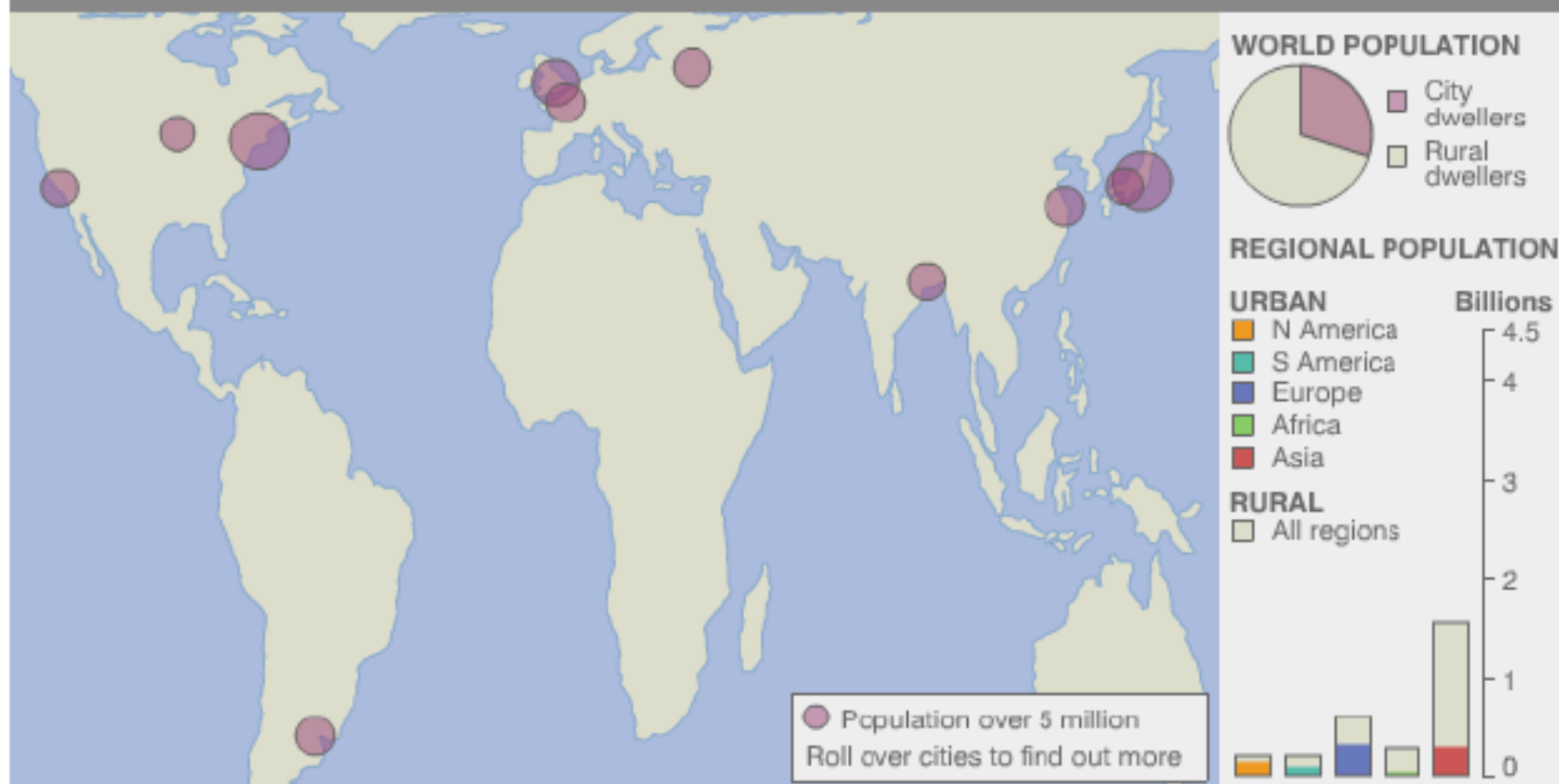
## Proportion of population aged 60 and over



Source: UNDESA, World Population Ageing 1950-2050

## Demographic history of urbanization - 1

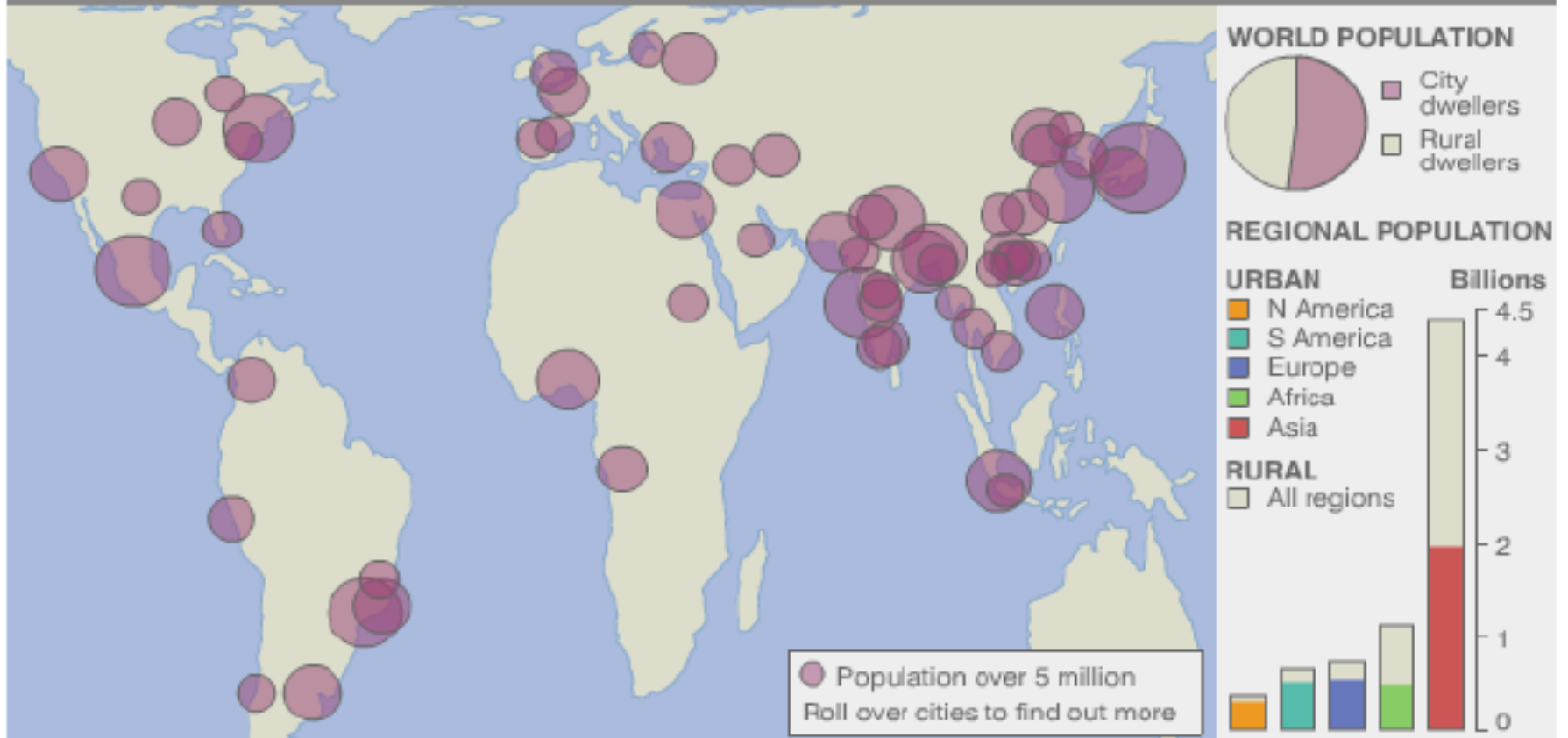
### 1955: Europe and N America lead the way



In 1955, North America and Europe are the most urbanised regions, although Europe has only recently passed the 50% urbanised mark. Urban growth is fastest in Latin America and Africa, although the numbers in Africa remain low. Tokyo has just overtaken New York as the world's biggest city.

## Demographic history of urbanization - 7

### 2015: African growth fastest - Asian growth biggest



The world's urban population is expected to hit 4bn between 2015 and 2020, about the same time as China becomes more than 50% urbanised. Most of the growth will happen in Africa and Asia, with Africa's urban population growing fastest in percentage terms and Asia seeing the biggest volume of growth.

# Measurements at national and local level

[Social Progress Index](#)

[BES \(ISTAT - Italy\)](#)

[Local Wellbeing Project](#)

[Local Wellbeing Index](#)

[Ecosistema Urbano \(Legambiente – IT\)](#)

[Qualità della vita \(Il Sole 24 Ore - Italy\)](#)

# Social Progress Indicator

	score/ value	rank	strength/ weakness		score/ value	rank	strength/ weakness		score/ value	rank	strength/ weakness
<b>Basic Human Needs</b>	<b>91.49</b>	<b>30</b>		<b>Foundations of Wellbeing</b>	<b>90.28</b>	<b>15</b>		<b>Opportunity</b>	<b>76.35</b>	<b>19</b>	
<b>Nutrition and Basic Medical Care</b>	<b>99.08</b>	<b>4</b>		<b>Access to Basic Knowledge</b>	<b>96.89</b>	<b>15</b>		<b>Personal Rights</b>	<b>94.76</b>	<b>20</b>	
Undernourishment	2.50	1		Adult literacy rate	98.85	15		Political rights	36.00	34	
Maternal mortality rate	3.86	6		Primary school enrollment	99.30	28		Freedom of expression	0.93	27	
Child mortality rate	3.30	12		Secondary school enrollment	103.18	1		Access to justice	0.99	1	
Child stunting	1.23	16		Gender parity in secondary enrollment	0.98	46		Freedom of religion	3.70	51	
Deaths from infectious diseases	8.70	2		Access to quality education	3.46	23		Property rights for women	4.89	2	
<b>Water and Sanitation</b>	<b>99.83</b>	<b>12</b>		<b>Access to Information and Communications</b>	<b>86.11</b>	<b>29</b>		<b>Personal Freedom and Choice</b>	<b>74.41</b>	<b>43</b>	
Access to at least basic drinking water	100.00	1		Mobile telephone subscriptions	153.00	1		Vulnerable employment	17.40	52	
Access to piped water	100.00	1		Internet users	61.32	58		Early marriage	0.00	1	
Access to at least basic sanitation facilities	99.28	25		Access to online governance	0.92	8		Satisfied demand for contraception	68.20	74	
Rural open defecation (% of pop.)	0.00	1		Access to independent media	89.50	33		Corruption	50.00	43	
<b>Shelter</b>	<b>94.16</b>	<b>34</b>		<b>Health and Wellness</b>	<b>84.92</b>	<b>15</b>		<b>Inclusiveness</b>	<b>69.54</b>	<b>15</b>	
Access to electricity	100.00	1		Life expectancy at 60	24.65	9		Acceptance of gays and lesbians	62.78	23	
Quality of electricity supply	5.91	34		Premature deaths from non-communicable diseases	202.42	12		Discrimination and violence against minorities	4.80	43	
Household air pollution attributable deaths	0.34	19		Access to essential services	81.16	14		Equality of political power by gender	2.67	24	
<b>Personal Safety</b>	<b>72.91</b>	<b>39</b>		Access to quality healthcare	3.43	26		Equality of political power by socioeconomic position	2.77	24	
Homicide rate	0.78	18		<b>Environmental Quality</b>	<b>93.20</b>	<b>5</b>		Equality of political power by social group	3.60	3	
Political killings and torture	0.92	41		Outdoor air pollution attributable deaths	16.49	14		<b>Access to Advanced Education</b>	<b>66.70</b>	<b>8</b>	
Perceived criminality	4.00	86		Wastewater treatment	97.53	18		Years of tertiary schooling	0.45	63	
Traffic deaths	8.45	26		Greenhouse gas emissions	195.35	8		Women's average years in school	14.28	27	
				Biome protection	17.00	1		Globally ranked universities	71.00	7	
								Percent of tertiary students enrolled in globally ranked universities	80.00	1	

# Focal points to survey a system

- **Habitat** (factors, conditions)
- **Business** (activities and actors)
- ***Comunitas*** (demographic trends, society, institutions)
- ***Ethos*** (culture, aspirations, values)