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Statistics in perspecitve: ITU's Digital Access Index (DAI)

Vanessa Gray
Market, Economics, Finance Unit
Telecommunication Development Bureau
International Telecommunication Union

ITU Digital Access Index

Chapter 5

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World Telecommunication Development Report

Access Indicators for the Information Society

What is the DAI?

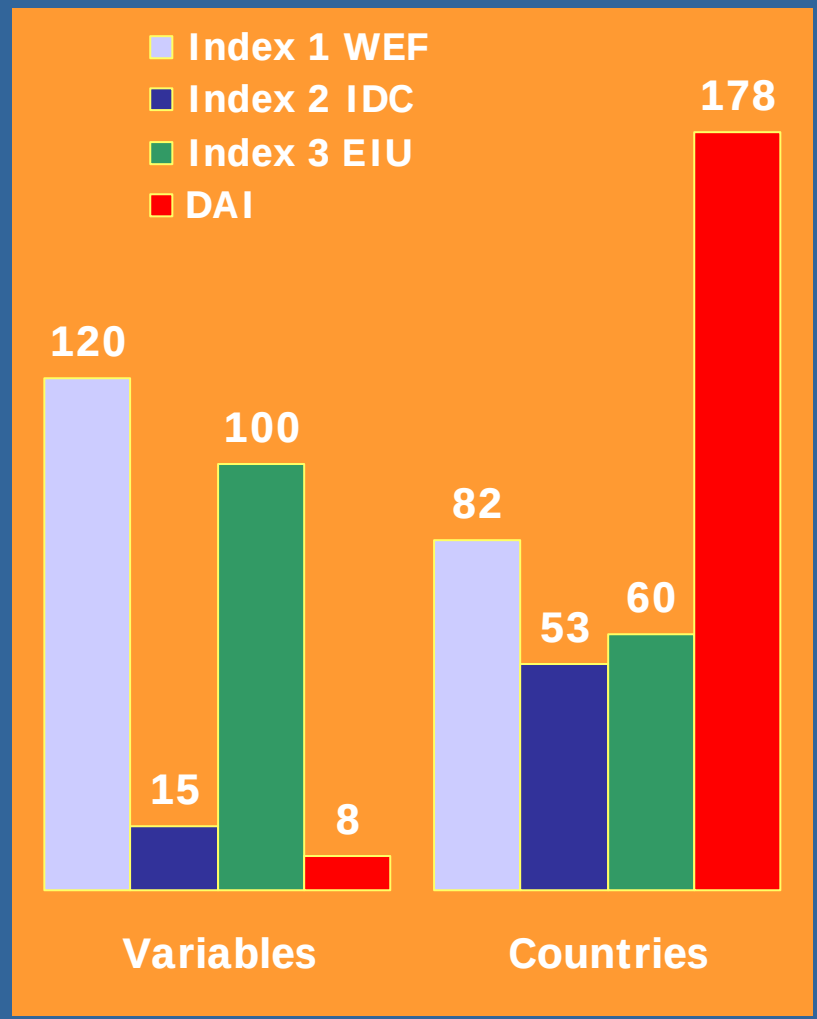
The DAI ranks 178 countries according to their ability to access Information and Communication Technologies (ICT)

Why an index?

A selection of indicators compiled into an index gives a better overview than any single indicator

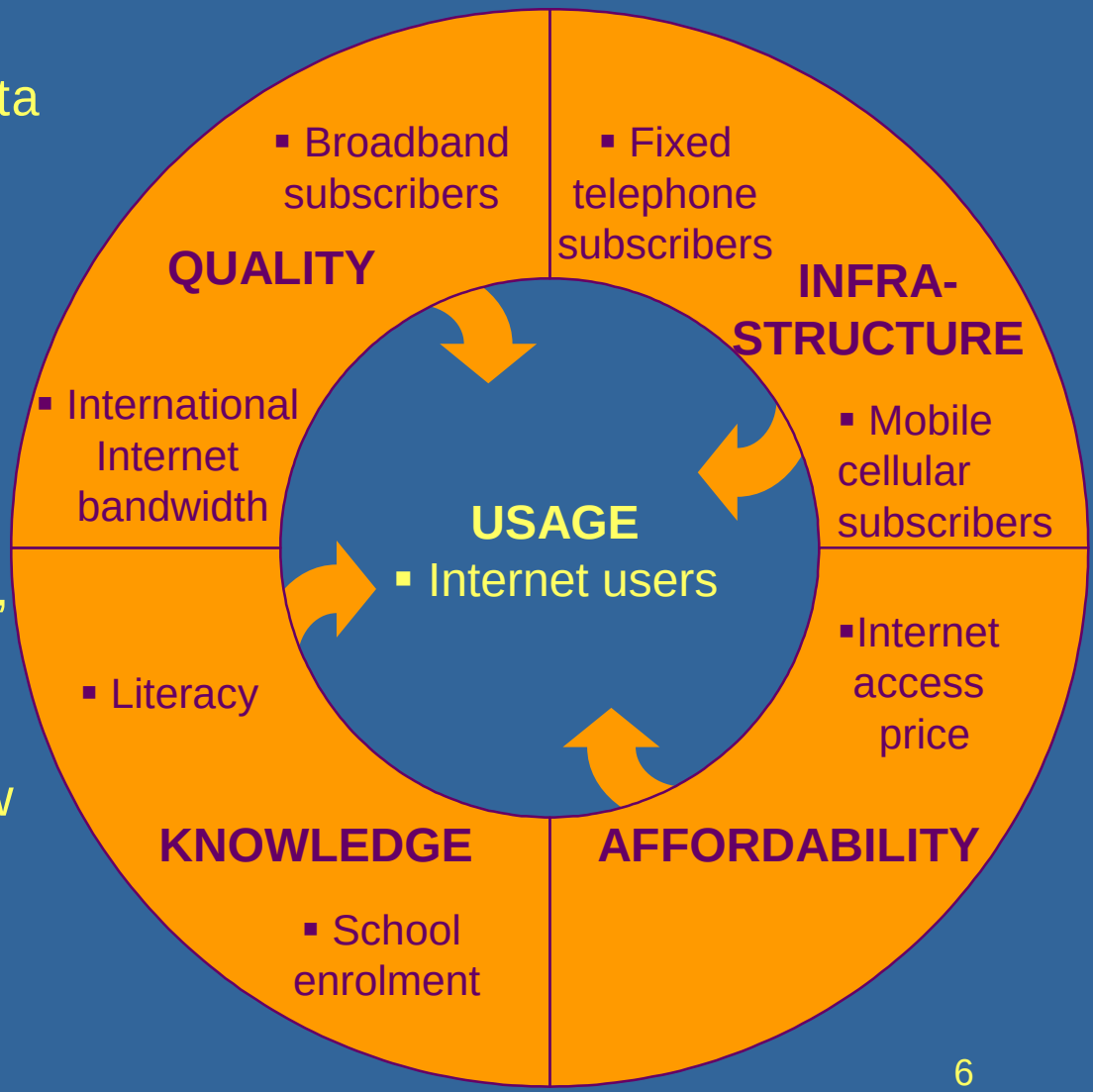
Why another ICT index?

- Almost all existing ICT indices concentrate primarily on developed economies
- Some do not use internationally comparable indicators and some have methodological snags or are susceptible to distortions due to the use of qualitative variables
- Most are not specifically targeted at measuring ICT access
- Wherever these indices use too many variables, transparency compromised



Digital Access Index

- ITU expertise:
  - Leading source of ICT data
  - Analysis and research strength
- Inclusive:
  - 178 economies, most of any other ICT index
- Transparent:
  - 5 categories, 8 indicators, easy to decode
- Classifications:
  - High, upper, medium, low
- Flexibility:
  - gender sub-index
  - national indices
  - index over time



Compiling DAI: Korea (Rep.)

Category	Variable	Korea (Rep.)	÷ Goal-post	= Indicator	* Weight	= Index value	
1. Infra-structure	1. Fixed telephone subscribers per 100 inhabitants	48.6	60	0.81	½	0.40 + 0.34	**0.74**
	2. Mobile cellular subscribers per 100 inhabitants	67.9	100	0.68	½		
2. Afford-ability	3. 1 – (Internet access price as percentage of per capita income)	98.8	100	0.988	1		**0.99**
3. Know-ledge	4. Adult literacy	97.9	100	0.98	2/3	0.65 + 0.30	**0.96**
	5. Combined primary, secondary and tertiary school enrolment level	91.0	100	0.91	1/3		
4. Quality	6. International Internet bandwidth (bits) per capita	362	10'000	0.74[a]	½	0.37 + 0.37	**0.74**
	7. Broadband subscribers per 100 inhabitants	21.9	30	0.73	½		
5. Usage	8. Internet users per 100 inhabitants	55.2	85	0.65	1		**0.65**
Digital Access Index (Average of 5 categories above)							**0.82**

Note: a) Because of the large spread of values among economies, a logarithm is used to calculate this value: (LOG (1'867) – LOG (0.01)) / (LOG (10'000) – LOG (0.01))

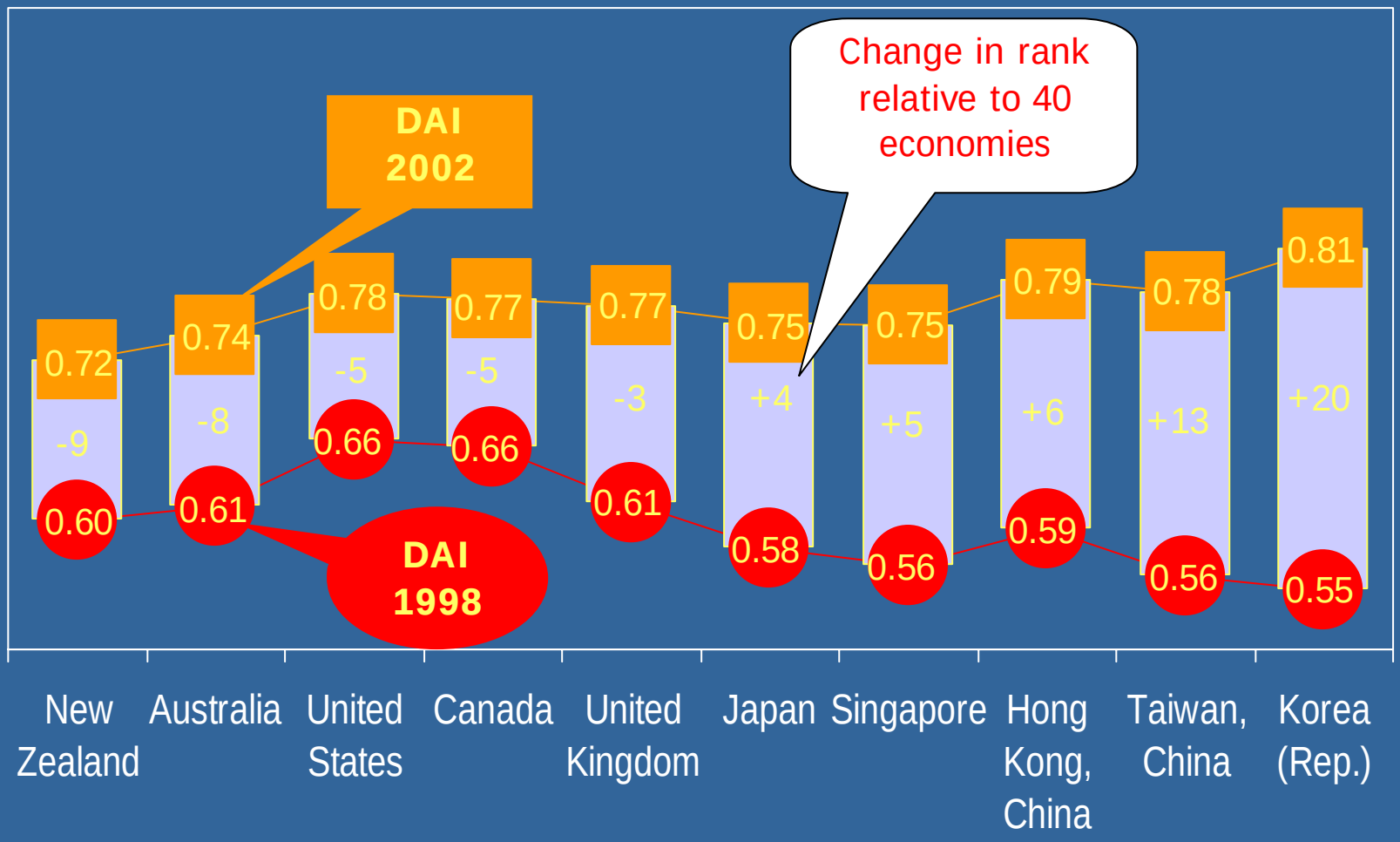
Rationale for goalposts: Where ICTs are headed

Indicator		Note
Main telephone lines per 100 inhabitants	60	The highest value was 69.3, by Sweden in 1998. This has since declined to 65.3 in 2002 .
Mobile subscribers per 100 inhabitants	100	The value of 100 has already been reached by two economies: Luxembourg and Taiwan, China.
Literacy & School enrolment	100	The UNDP establishes these values
Internet access price as percent of GDP per capita	100	It is not possible to spend more than one earns on Internet access.
Broadband subscribers per 100 inhabitants	30	The Republic of Korea leads the world with 21 broadband subscriptions per 100 inhabitants at the end of 2002. At a level of 30 per 100 inhabitants, more than 90 percent of households would have broadband.
International Internet bandwidth per capita	10'000	This level has already been exceed in three countries most notably Denmark where the value is more than twice the goalpost.
Internet users per 100 inhabitants	85	The highest value for Internet penetration over the entire population in Iceland with a rate of 65 (81 percent of of those between age 12-80). A goalpost of 85 implies that all in that age range are using the Internet.

Top 10

	Economy	Infra-structure	Afford-ability	Know-ledge	Quality	Usage	DAI
1	Sweden	0.94	0.99	0.99	0.64	0.67	0.847
2	Denmark	0.89	0.99	0.99	0.66	0.60	0.828
3	Iceland	0.89	0.99	0.96	0.50	0.76	0.820
4	Korea (Rep.)	0.74	0.99	0.96	0.74	0.65	0.817
5	Norway	0.84	0.99	0.99	0.55	0.59	0.793
6	Netherlands	0.78	0.99	0.99	0.61	0.60	0.792
7	Hong Kong, China	0.93	1.00	0.83	0.68	0.51	0.790
8	Finland	0.81	0.99	0.99	0.55	0.60	0.786
9	Taiwan, China	0.98	0.99	0.95	0.56	0.45	0.786
10	Canada	0.69	0.99	0.97	0.64	0.60	0.779
11	United States	0.74	0.99	0.97	0.54	0.65	0.778
24	Slovenia	0.78	0.97	0.94	0.44	0.44	0.716

Reversal of fortune



Thank You.

Vanessa.gray@itu.int