

Broadband—who's on top?

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With its ability to promote e-commerce, collaborative work environments and popular online entertainment, the web is becoming as essential to economic progress as water, light and power. No surprise, then, that broadband usage – in terms of speed and penetration – is becoming a key competitive measure for governments worldwide.

Traditionally, the OECD's semi-annual report on broadband usage has been the gold standard for ranking countries by broadband adoption. Ordering the world's developed economies according to basic broadband usage measurements, it often prompts catch-up policy initiatives by rich countries eager to improve their score. But according to a new study by the US-based Phoenix Center for Public Policy Studies, the OECD's ranking may not be all its cracked up to be.

The study* claims that broadband usage depends not only on national policies, but also on a country's demographics and educational levels, such as literacy rates, and market factors, such as the price of broadband. The OECD, the Phoenix study points out, measures the adoption rates using raw per capita subscription data per household or business. This can be particularly misleading as household and business size can vary widely country by country.

Instead, the Phoenix Center has created its own measurement of broadband connection rates, called the Broadband Performance Index (BPI.) The BPI takes a number of qualities of a country into account in order to create a more accurate ranking. Specifically, the BPI measures the index of broadband price in the country and the gross domestic product per capita in the country.

Getting specific

The Phoenix ranking also uses the Gini Coefficient, which is a measure of income inequality. It also includes the percentage of people with post-secondary education, the percentage of the labour force aged 65, and the density and the percentage of the population living in the country's largest city. The number of telephones per 100 persons, the number of people per household, the people per business establishment in the country are also taken into consideration.

Interestingly, results showed that the Gini measurement had the largest effect- a 10% increase in income inequality reduces subscriptions by about 8.5%. But the findings showed that all the factors influence the adoption rates. As a result, the BPI ranked the countries on a variation from the mean. A positive BPI score shows that a country is over performing - or has higher rates than would be expected considering its economic strength or educational levels. A negative score shows a country which is underperforming or is below 'expectations.' If the score is 0, then the country has a rate which would be expected.

Although some countries still slot into the same place as they did on the OECD rankings, others fit in somewhere else entirely as shown by the table below:

Degree of Under performance	(ranking for BPI) Country	Degree of overperformance	OECD ranking (Dec 2006)
	(1)Finland	0.279	7
	(2)Iceland	0.232	3
	(3)Belgium	0.212	10
	(4)Portugal	0.174	22
	(5)Switzerland	0.128	5
	(6)Turkey	0.093	29
	(7)Austria	0.089	16
	(8)U. Kingdom	0.068	11
	(9)France	0.056	13
	(10)Netherlands	0.040	2
	(11)Canada	0.018	9
	(12)South Korea	0.003	4
	(13)Australia	0.00	16
-0.006	(14)U. States		15
-0.010	(15)Hungary		24
-0.016	(16)Sweden		8

-0.020	(17)Norway	6
-0.024	(18)Japan	14
-0.032	(19)Italy	20
-0.046	(20)Spain	19
-0.063	(21)Mexico	30
-0.067	(22)Germany	18
-0.090	(23)Denmark	1
-0.115	(24)Poland	26
-0.431	(25)New Zealand	21
-0.511	(26)Czech Rep	25
-0.523	(27)Slovak Rep	27
-.0566	(28)Luxembourg	12
-0.618	(29)Ireland	23
-1.00	(30)Greece	28

The BPI throws up some interesting results. Despite claims that South Korea and Japan are broadband leaders, South Korea is only living up to expectations and Japan is below where it should be given its education levels, demographics and other attributes. Meanwhile Denmark, which the OECD ranked first, is underperforming relative to expectations. And both Portugal and Turkey are performing comparatively well as they both have low OECD ranks but overperform substantially in the BPI index.

Meanwhile, Finland, a country not known for coming out on the top of any OECD rankings, takes first place on the Phoenix list as opposed to ranking 7th on the OECD's December 2006 ranking, showing that it makes the very best use of its national advantages in terms of broadband usage and adoption.

Some of the findings, the study concludes, should be of significant interest to policymakers. For example, the exercise shows that the US generally meets expectations in terms of broadband subscriptions. This finding conflicts with claims that the United States is in a "broadband ditch" and is failing to perform up to the standards of other rich economies, at least with respect to subscriptions.

* Broadband Performance Index: A Policy-Relevant Method of Comparing Broadband Adoption among Countries. Phoenix Center Policy Paper #29

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