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Losing Ground: Broadband in the United States

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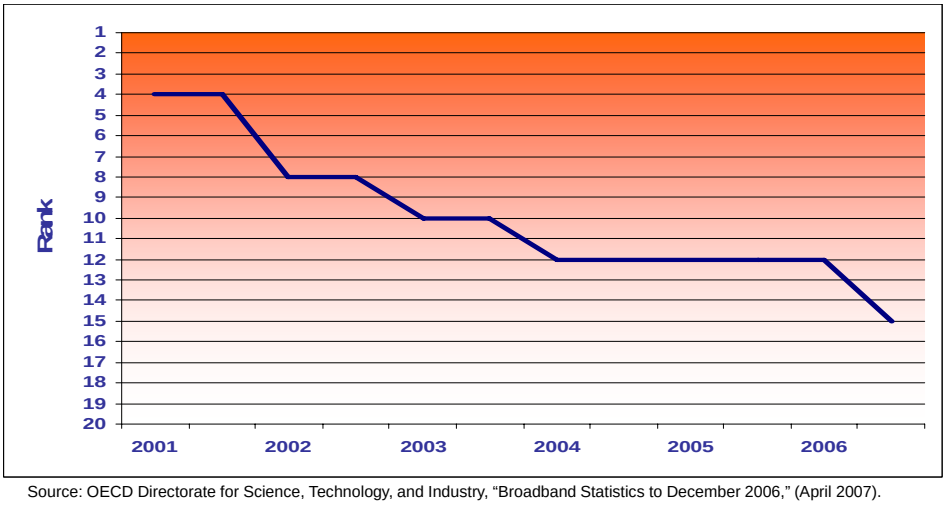
U.S. Ranking Among OECD Countries in Broadband Penetration



Source: OECD Directorate for Science, Technology, and Industry, "Broadband Statistics to December 2006," (April 2007).

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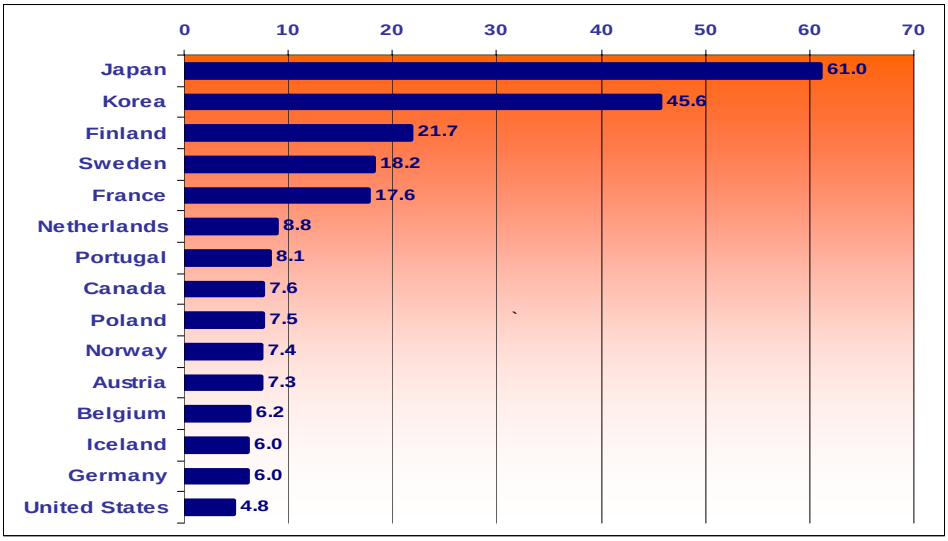
Average Broadband Speed (Mbps)



Source: ITIF Broadband Rankings, OECD.

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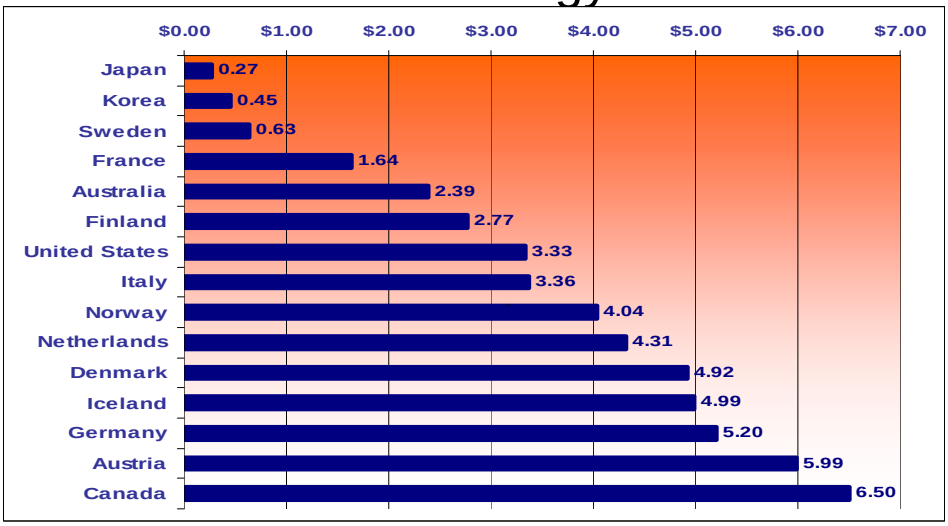
Price/Month per Mbps of Fastest Technology



Source: ITIF Broadband Rankings, OECD.

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ITIF Broadband Rankings

Rank	Nation	Penetration	Speed	Price	Overall Score
		Subscribers per Household	Average Speed (mbps)	Price per Month for 1 mbps of Fastest Technology (USD PPP)	
1	Korea	0.90	45.6	0.45	15.73
2	Japan	0.52	61.0	0.27	14.99
3	Iceland	0.83	6.0	4.99	12.14
4	Finland	0.57	21.7	2.77	12.11
5	Netherlands	0.73	8.8	4.31	11.87
6	Sweden	0.49	18.2	0.63	11.54
7	France	0.49	17.6	1.64	11.41
8	Denmark	0.70	4.6	4.92	11.37
9	Norway	0.64	7.4	4.04	11.29
10	Canada	0.62	7.6	6.50	11.11
11	Belgium	0.54	6.2	6.69	10.60
12	United States	0.51	4.8	3.33	10.47
13	Switzerland	0.68	2.3	21.71	10.40
14	Australia	0.50	1.7	2.39	10.23
15	Austria	0.42	7.3	5.99	10.08
16	Portugal	0.42	8.1	10.99	9.92
17	United Kingdom	0.50	2.6	11.02	9.92
18	Germany	0.38	6.0	5.20	9.81
19	Italy	0.38	4.2	3.36	9.78
20	Luxembourg	0.51	3.1	18.48	9.71
21	Spain	0.44	1.2	12.46	9.48
22	New Zealand	0.36	2.3	9.20	9.26
23	Ireland	0.37	2.2	13.82	9.14
24	Poland	0.20	7.5	13.00	8.69
25	Czech Republic	0.27	1.6	24.10	8.11
26	Hungary	0.30	3.0	44.24	7.53
27	Greece	0.12	1.0	33.19	6.93
28	Slovak Republic	0.16	2.8	50.15	6.58
29	Mexico	0.16	1.1	60.01	6.00
30	Turkey	0.17	2.0	115.76	3.81
	Average	**0.46**	**9.0**	**16.52**	**10.00**

Sources: ITIF Broadband Rankings, OECD.

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Leading Criticisms of Rankings

- U.S. leads the world in broadband subscribers
- U.S. ranks more favorably in Internet users.
- OECD data excludes wireless, and students and workers who get broadband for free.

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Leading Criticisms of Rankings

- Per capita is the wrong measure.
- U.S. is less urban/has lower population density.
- Comparison requires regression analysis.
- We have the “right” amount of broadband.

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Penetration: Per Household vs. Per Capita

Nation	Per Household	Per Capita
Australia	13	16
Austria	18	17
Belgium	9	10
Canada	7	9
Czech Republic	25	25
Denmark	4	1
Finland	8	7
France	16	13
Germany	21	18
Greece	30	28
Hungary	24	24
Iceland	2	3
Ireland	22	23
Italy	20	20
Japan	10	14

Nation	Per Household	Per Capita
Korea	1	4
Luxembourg	11	12
Mexico	29	30
Netherlands	3	2
New Zealand	23	21
Norway	6	6
Poland	26	26
Portugal	19	22
Slovak Republic	28	27
Spain	17	19
Sweden	15	8
Switzerland	5	5
Turkey	27	29
U.K.	14	11
United States	12	15

Sources: OECD Directorate for Science, Technology, and Industry and ITIF calculations.

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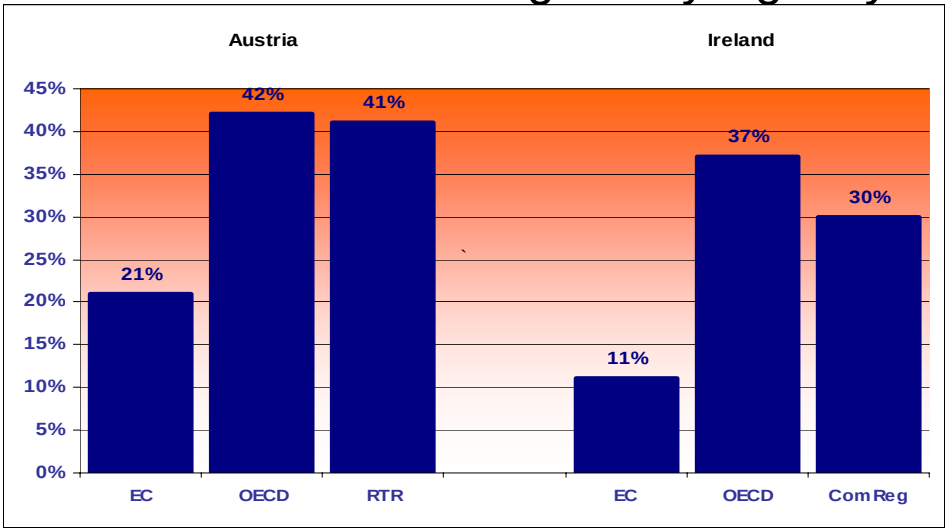
Data Comparison: OECD vs. EC vs. Regulatory Agency



Sources: OECD, European Commission, RTR and Comreg. All data from late 2006.

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Population Density or "Urbanicity"

"Urbanicity" =

Urbanization (% Living in Metro Areas)

X

Population Density of Metro Areas

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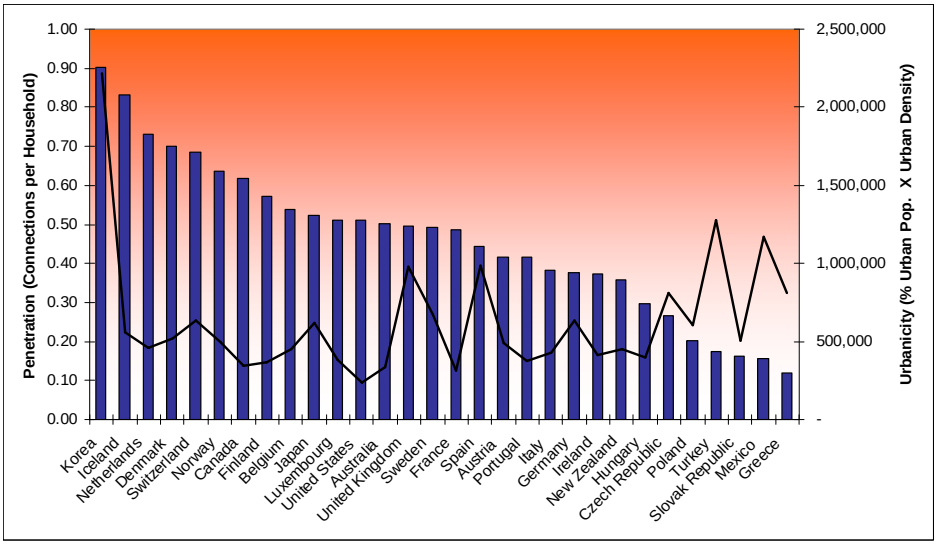
Penetration vs. "Urbanicity"



Sources: OECD Directorate for Science, Technology, and Industry; United Nations; Demographia and ITIF calculations.

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ITIF Regression Analysis

Statistically Significant Factors:

- Per Capita Income
- "Urbanicity"
- Internet Users
- Inter-modal Competition (HHI)

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Treat Regressions Carefully

- Omitting important variables distorts results
- Policy very difficult to quantify
- Factors: significant is *not* determinative
  - United States: “Urbanicity” vs. PCI
- Nations’ performance on leading variables have not changed, but broadband performance has.

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Do we have the “right” amount?

- In Japan, 100 mbps FTTH is the fastest growing technology (absolute and %).
  - FTTH 30% of market, DSL is declining.
- In Korea, FTTH is 14% of the market.
- Real Question: Will the market determine the right amount?

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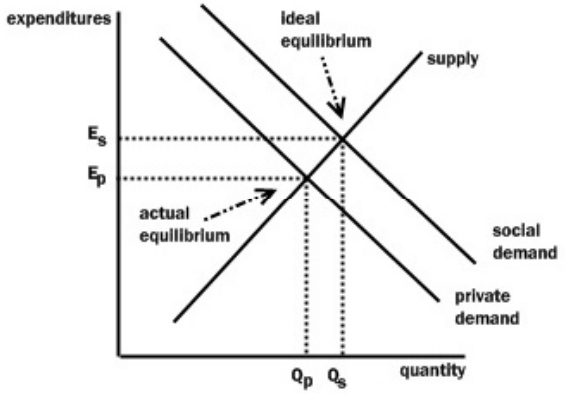
Supply and Demand for Broadband with Positive Externalities



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