What Matters: Broadband Penetration or Capital Investment?

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The Gospel According to OECD

Broadband subscribers per 100 inhabitants, by technology, Dec. 2006

Source: OECD
But Recent OECD Data Seem to Understate U.S. Penetration As They Ignore Wireless

**U.S. Broadband Penetration Estimates**

How Do We Evaluate U.S. Performance?

- We need empirical estimates of the determinants of broadband penetration.
- Existing cross-sectional studies assume that the structural relationship driving broadband penetration is the same across countries.
- When I estimate the effects of cable television penetration, Internet use, population density, income, and the number of years since the launch of broadband, I find that the 2006 BB penetration prediction for the U.S. is:
  - 133 subscribers per 100 households for the entire 28 country sample
  - 100 subscribers per 100 households for the entire sample except for the EU-15
  - 54 subscribers per 100 households if I exclude the EU-27 from the sample
- OECD data place us at (an understated) 51 subs per 100 households.
- But today, we are at about 60 subs per 100 households (Nielsen).
- I will let you decide: How are we doing?
More Important: US Leads in High-Tech Investment

PCs in Use per 100 Population, 2003


And in ICT Capital Stock

ICT Capital per Hour Worked, 2003

Source: Fuss and Waverman
EU’s Limited Data Show That Europe Lags North America in Telecom CapEx

Capital Expenditures by Fixed-Wire Telecom, Wireless, and Cable TV Companies: North America. v. EU-15

Note: Canadian numbers multiplied by 12 to adjust for size of Canada.
Sources: U.S. Census Bureau; London Econ; CRTC, Company Reports

My Data on ILEC CapEx Shows that the Trend Continues in 2005-06

Capital Expenditures/ Line:/North American v. EU Local Exchange Carriers' Fixed-Line Networks

Notes: EU-15 — U.S. — Canada (TELUS)
The EU Is Now Proposing “Functional Separation” to Promote Broadband Growth through Intra-Platform DSL Competition

- Given EU investment shortfall, this appears to be a dangerous policy direction.
- The trade-off: How much high-tech investment should regulators be willing to sacrifice to promote short-term increases in broadband penetration?