

Pricing of interconnection and just about everything else

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Development of the economy exemplified by:

Turing

Turing Pharmaceuticals

Martin Shkreli, (generic) Daraprim tablet price increased from \$13.50 to \$750, ...

Development of the economy:

- dominated by search for choke points
- minimal real investments
- assisted by confusology (the “post-truth” world)

Some instructive examples:

Verizon spokesperson, cited in *Bloomberg News*, Feb. 26, 2015, on high international roaming rates for data (up to \$20/MB):

It's a complex system; there's lots of different layers that determine rates, like regulatory and tax issues in different countries. Our goal, as always, is to provide the best value.

Some instructive examples (cont'd):

T-Mobile filing with the FCC, May 27, 2014:

- cost of delivering mobile data: \$0.002/MB
- T-Mobile wholesale prices to international carriers:

	price per MB
median	\$0.09
average	0.20
95th percentila	0.40

- retail rates: up to \$20/MB

Telecom economics:

- worldwide telecom revenues: \$2,000 billion
- at \$1 per Mbps transit pricing, worldwide IP traffic:
under \$10 billion
- worldwide ad spending: around \$500 billion

Wall Street view of main issues in pricing:

P. de Sa et. al, *Bernstein Research* report, June 2014:

With the incremental cost of providing that extra minute of calling, or extra byte of data, close to zero, carriers generally try to price based on what they think they can get away with, constrained by competition, customer inertia (either voluntary or enforced by contracts), regulation (or threats thereof), and their execution capabilities.

Network costs not a significant factor in this view!

Back to “pharmaceutical Turing:”

- Mylan list price of a pack of EpiPens: \$600
- price paid to manufacturer by Mylan: \$69
- claim by Silicon Valley engineers: \$8
 - shows various neglected regulatory and other costs

Development of the economy:

- threats to foundations of market capitalism
- engineering efficiency secondary or tertiary
- technical measures in pursuit of confusology, “damaged goods,” etc.

Modern market economy:

- not natural state for *Homo sapiens*
- historically and by nature, people care primarily about social relations
- both firms and individuals resent the cold discipline of the market; strategic games a la *Game of Thrones* much more natural
- modern technology and human psychology offer powerful tools to eliminate market discipline

Development of the economy:

- incessant search for choke points
- effective choke points hard to predict (as in case of Apple app store)
- skills at regulatory and PR games to be key to success

More information, papers, and presentation decks:

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