
***Universal Access to
Broadband Services:
State of Play in APEC***

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- **What? and Why?**
- **Where are we now?**
- **What do we know?**
- **What are the 'leaders' doing?**
- **Two Issues**
 - **Wild over Wireless**
 - **Broadband in Stimulus Packages**
- **Workshop's Focus**

- What is Broadband?
... comes from the words "broad bandwidth"... High-speed transmission. ... communication operating at a bandwidth greater than 2 Mbps. ... a transmission medium that can carry signals from multiple independent network carriers on a single cable ... transmission medium that can support a wide range of frequencies...

- What is Broadband

Not only **minimum speeds**, but also standards for quality of service, interoperability, ease of upgrading and security (minus filtering) so there are assurances of reliability and usability across states.

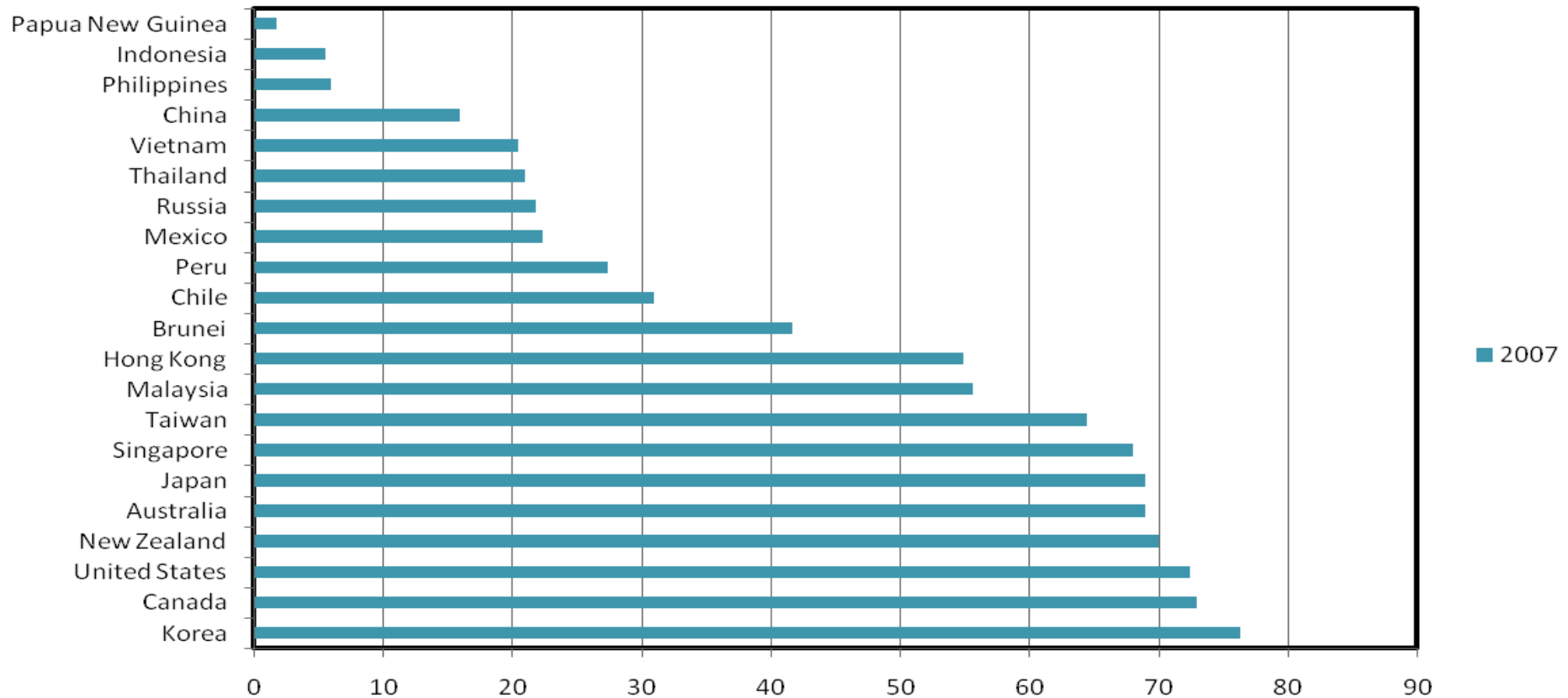
Why Broadband?

“10 percent increase in broadband’s household penetration delivers a boost to a country’s GDP that ranges from 0.1% to 1.4%”

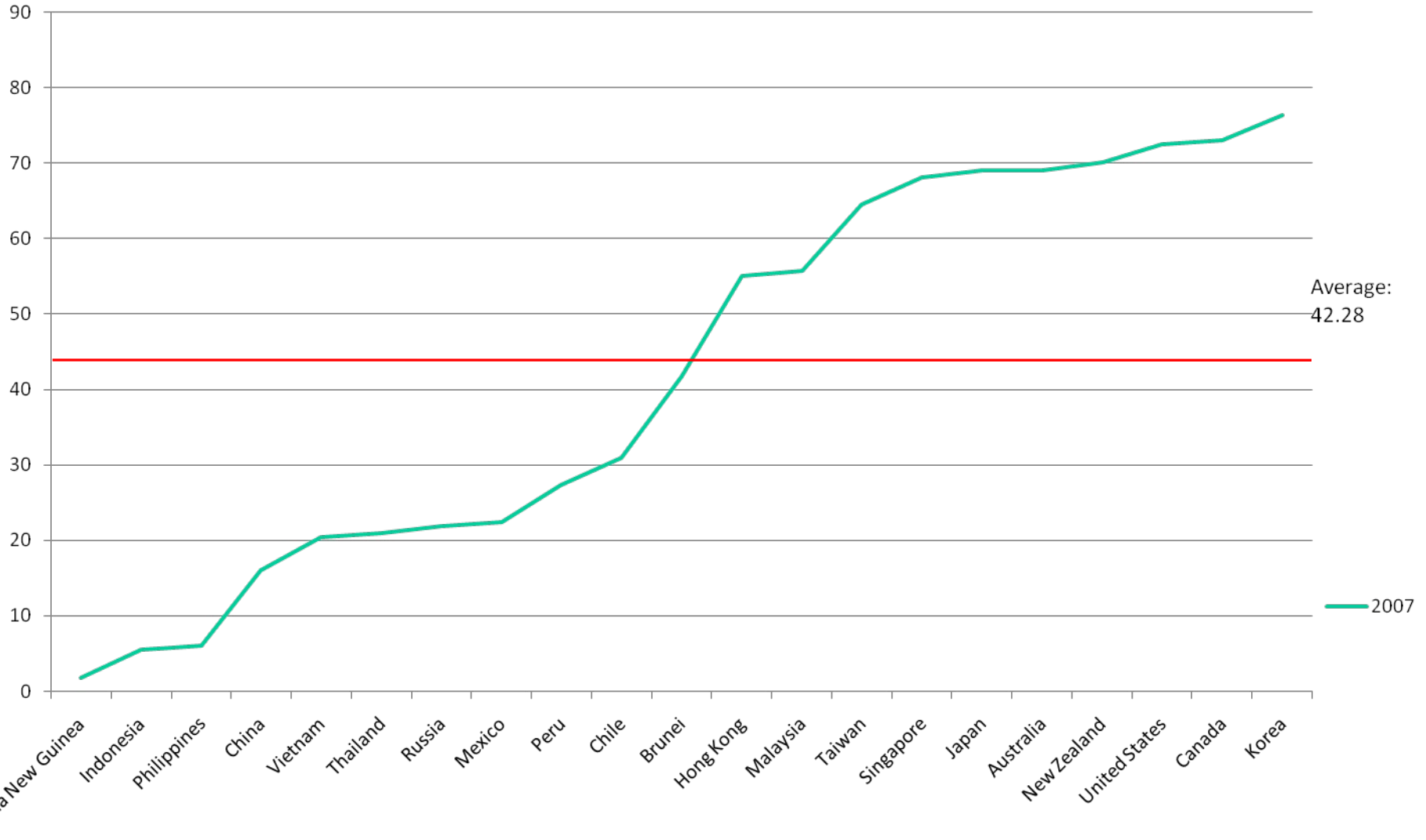
- *“Bringing broadband penetration levels in emerging markets to today’s W. European levels could potentially add US\$300-420 b in GDP & generate 10-14 m jobs.”*

Internet Penetration in APEC economies

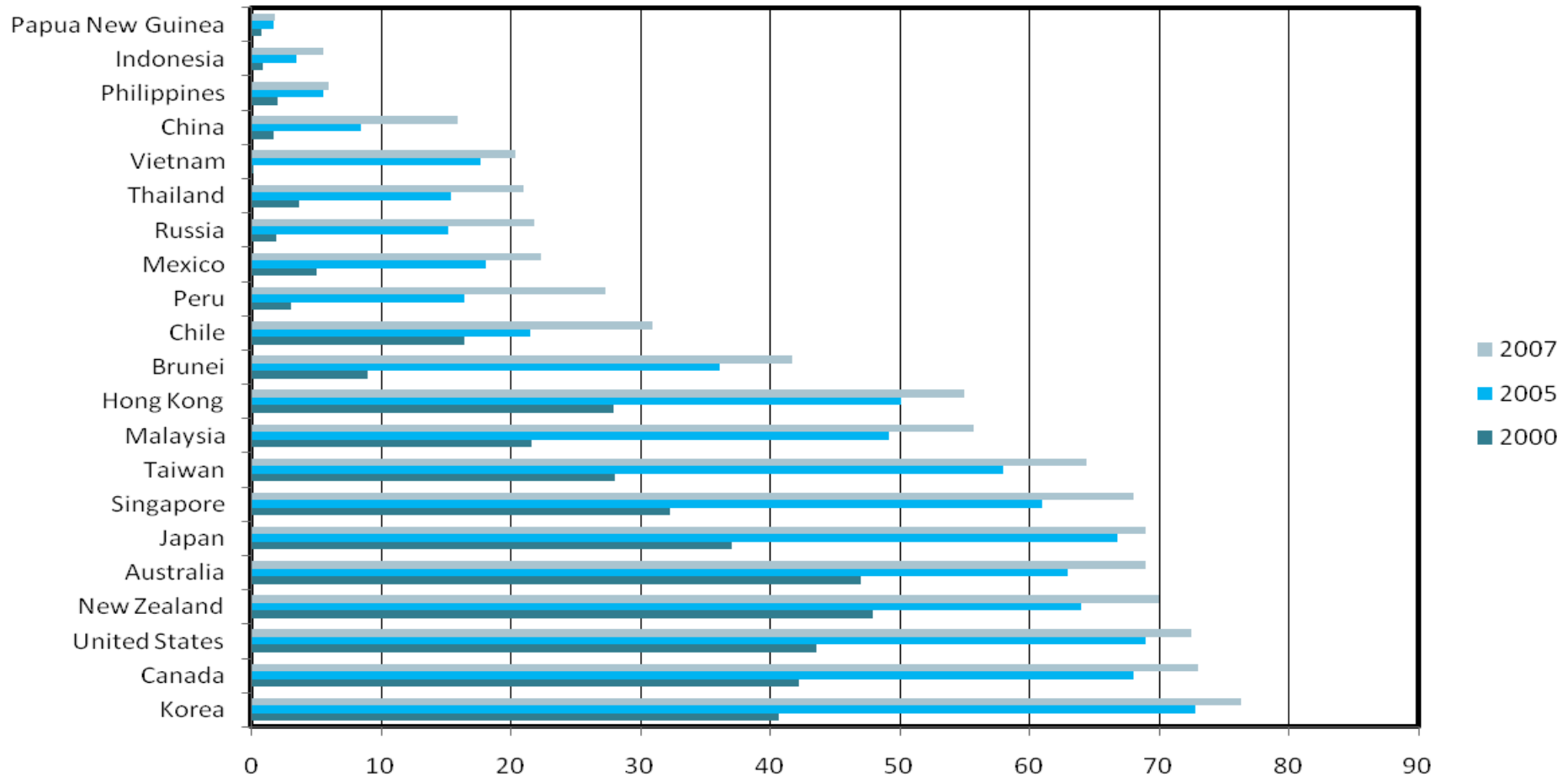
2007



Internet Penetration (2007)



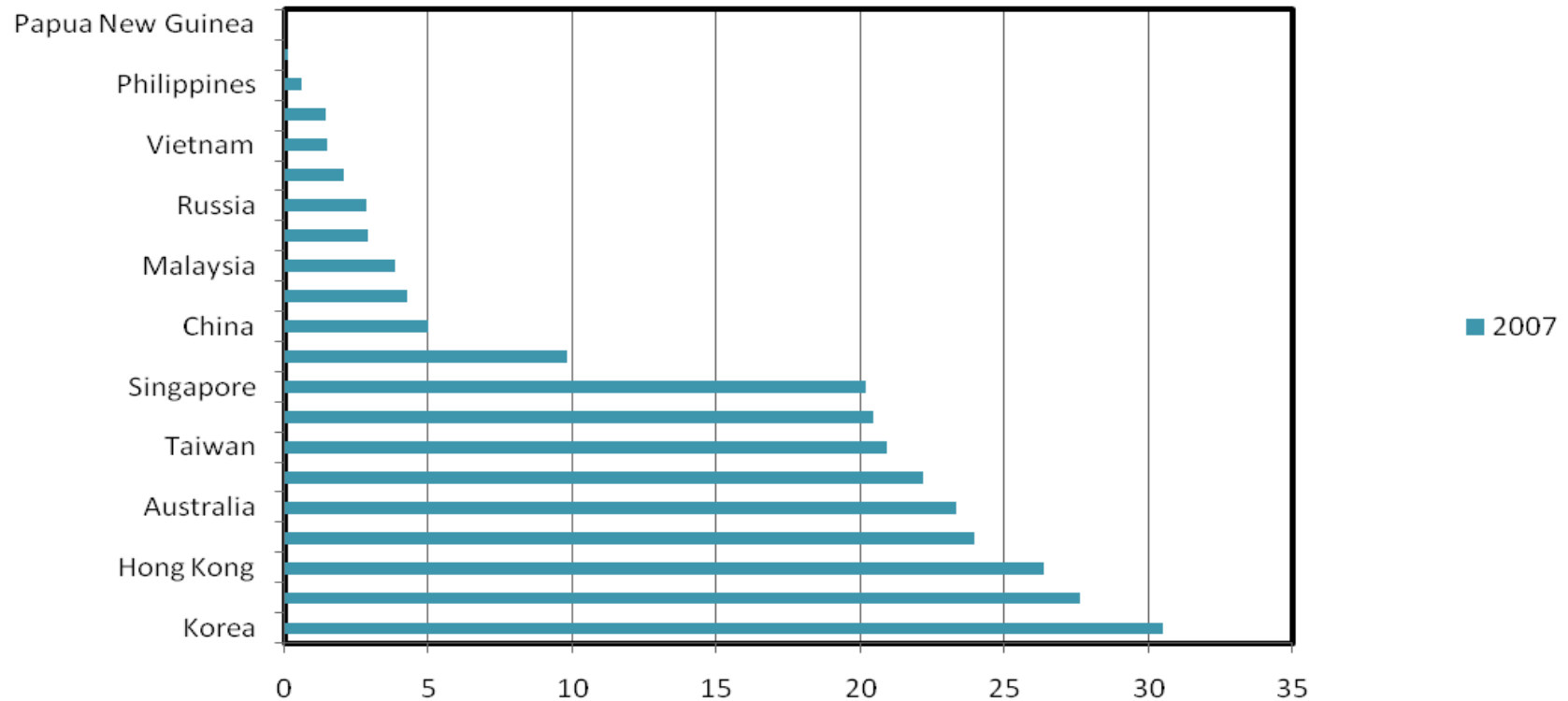
Internet Penetration in APEC economies (2000-2007)



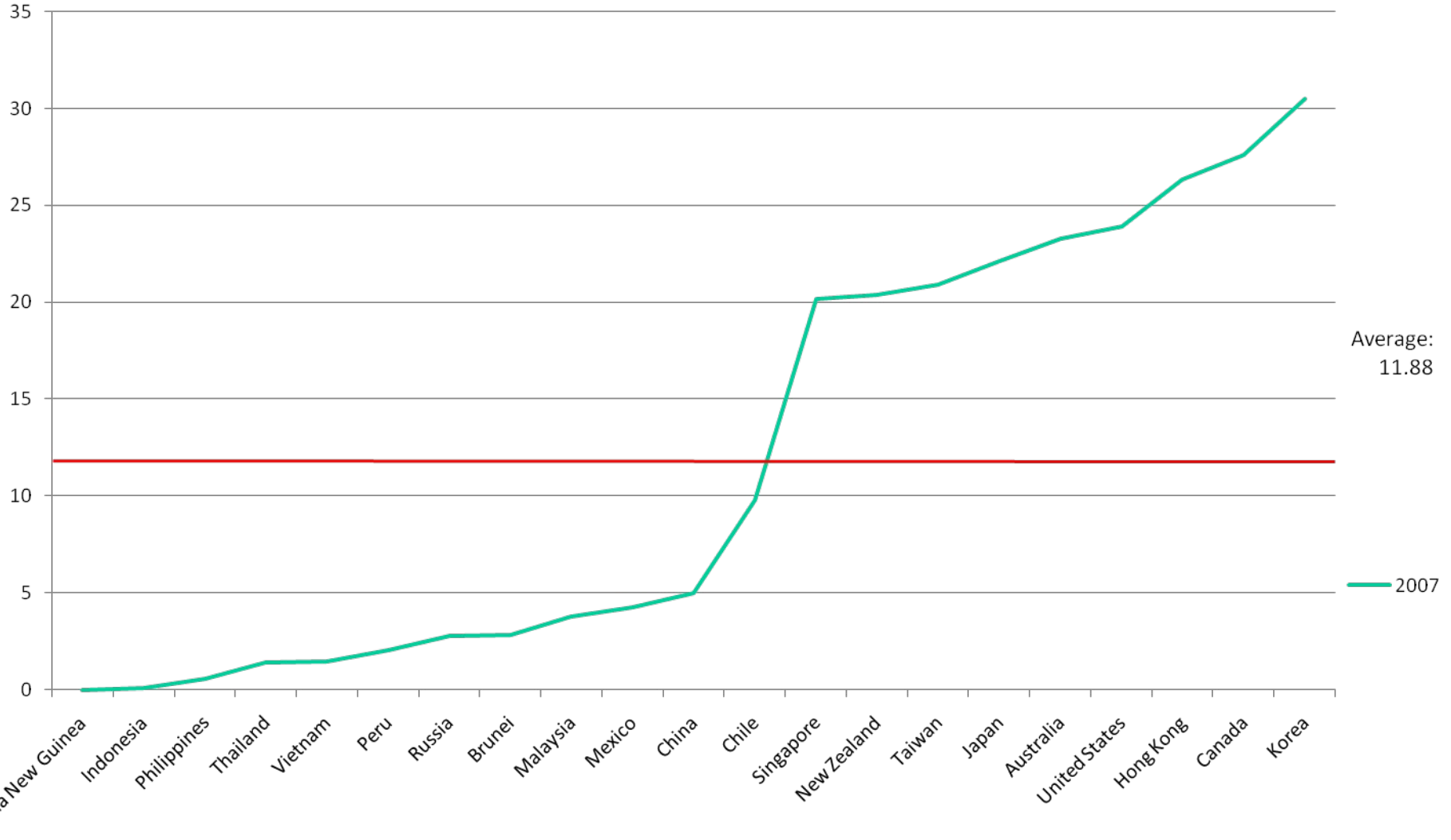
- Brunei (11)
- Peru (13)
- Mexico (14)
- Russia (15)
- Thailand (16)
- Vietnam (17)
- China (18)
- Indonesia (20)

Broadband Penetration in APEC economies

2007



Broadband Penetration (2007)



What do we know? Policy Matters, but non-policy matters also matter

- demographic variables such as age and education,**
- economic variables such as per capita income; and**
- supply variables like urbanization**

What do we know? Policy Matters

**nations with robust national
broadband strategies, fare better
than those without**

- 'robust' - those that make broadband a priority, coordinate across agencies, put real resources behind the strategy, and promote both supply and demand

What do we know? Policy Matters

nations with robust national broadband strategies, fare better than those without

- **Must address the various technologies, programs, training and support that must accompany network infrastructure.**
- **Widespread and top level support is needed**

What do we know? Policy Framework

- **Goals – clear, forward-looking and attainable**
- **Policies to stimulate high-speed broadband investment**
- **Policies to stimulate high speed broadband adoption and use**
- **Assessment & Accountability**

What do we know? Policy Matters

Financial incentives to spur broadband deployment.

- **tax policies to encourage investment**
- **infrastructure funding**
- **USF/USO for Broadband**
- **Non ICT Agency Initiatives**

What do we know? Regulatory Measures

- **Competition**
 - **unbundling regulations is important to broadband success.**

What do we know? Regulatory Measures

But do not overlook several key facts.

First, intermodal competition between separate physical networks (e.g. between digital subscriber line (DSL) services and cable modem services) also spurs broadband success.

What do we know? Regulatory Measures

But do not overlook several key facts.

Second, intramodal competition is not a panacea.

What do we know? Supply-side too!

initiatives to encourage broadband usage and digital literacy.

- **new applications, including more public content online, improving e-govt,**
- **supporting telework, telemedicine, and e-learning**

What do we know? Policy Matters

- **harness local (ie, sub-national) governments**
- **Communities roles**
 - **Connect Kentucky**

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|---|------|------|------|------|------|------|------|------|------|------|
| BROADBAND PENETRATION | 36.3 | 34.8 | 33.5 | 33.3 | 32.1 | 30.6 | 29.0 | 26.1 | 25.9 | 25.6 |
| POLICIES | | | | | | | | | | |
| Market competition, transparency and confidence | X | X | X | X | | X | X | X | X | X |
| Multi-platform access, Use of Mobile, fixed, wireless, satellite technologies | X | X | X | X | | X | | | | X |
| Open and interoperable public standards | X | | X | X | | X | | X | | |
| Convergence | X | X | X | X | | X | X | X | X | |
| Infrastructure Investment | | | | | | | | | | |
| Public | X | X | | X | | X | | X | X | |
| Private | | X | X | | X | | | | | X |
| Enhance connectivity of government offices, schools, hospitals and public health centers | X | X | | X | | X | | | | X |
| Regional and local ICT policy | X | | | X | X | | X | | | X |
| Policy review, Strategy monitoring, market assessment | X | | X | X | | | | X | | X |
| Pricing and Consumer protection | X | X | X | X | X | X | | | | X |
| Stimulate demand for broadband services | | | X | X | | | X | | X | X |

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| SERVICES | | | | | | | | | | |
| eGovernment | X | X | X | X | X | X | X | X | X | X |
| eCommerce | X | | | | | X | X | X | | X |
| eHealth | X | | | X | X | X | X | X | X | X |
| ICT and economic growth | X | X | X | X | | X | X | X | X | X |
| | | | | | | | | | | |
| RESEARCH AND DEVELOPMENT | | | | | | | | | | |
| ICT research | X | | X | X | | X | | X | | |
| Content | X | X | X | X | | X | X | X | | |
| Security | X | X | X | | | X | X | X | X | X |
| | | | | | | | | | | |
| INCLUSION | | | | | | | | | | |
| Extending broadband services to unserved/underserved areas | X | X | X | | X | X | X | X | X | X |
| Accessibility of online services to PWD and elderly | X | X | X | | X | X | X | X | | X |
| ICT in the educational system | X | X | | X | | X | | X | X | X |
| ICT-based education and skills development | X | X | | | | X | | X | | X |
| Culture | X | | | | | X | X | X | X | X |

Wild About Wireless

While admittedly slower than its wired relative, ***“(t)he economics of mobile broadband, however, make it the most cost-effective solution for large areas in the developing world and capable of reaching up to 2 b more users than wire line access.”***

– McKinsey

Wild About Wireless **Policy Options**

- **Spectrum availability**
- **Infrastructure/spectrum sharing**
- **Coverage Obligations**
- **Industry Structure**
- **Spectrum/license fees**

Spectrum availability

- **Make low-band spectrum available to reduce base station cost**
- **Ensure allocation of sufficient contiguous spectrum (10 - 12 MHz)**
- **Monitor and manage usage to optimize allocation**
- **Guarantee neutrality of technology to ensure innovation**

Infrastructure/spectrum sharing

- **Promote infrastructure sharing (tower/backhaul) to reduce network cost**
- **Allow spectrum sharing/national data roaming to increase efficiency and reduce operational costs**

Coverage obligations

- **Provide incentives for roll out (e.g., regulatory concessions)**
- **Encourage public-private partnership or grant separate licenses in rural areas to drive coverage**
- **Provide public funding for remote areas to achieve sufficient coverage**

Industry structure

- **Ensure an economically viable number of players in the market**
- **Allow industry consolidation if not market-distorting**

Spectrum/license fees

- **Charge cost-based spectrum/license fees to ensure affordability**
- **Consider awarding licenses based on coverage, not financial criteria**

Broadband in Stimulus Packages

“spurring investment in our nation's infrastructure is an effective strategy for getting Americans back to work during an economic downturn, particularly one that is expected to be longer than normal in duration”

- Information Technology and Innovation Foundation

investment in the digital infrastructure have a greater positive impact on jobs, productivity and innovation bec:

- 1) it spurs significant job creation in the short run;**
- 2) it offers superior job creation benefits because of the 'network multiplier'; and,**

investment in the digital infrastructure have a greater positive impact on jobs, productivity and innovation bec:

3) it leads to higher productivity, increased competitiveness, and improved quality of life in the moderate to long term.

Workshop Focus

- **Deepening Understanding**
 - **What Works, What Doesn't**
 - **Metrics**
- **Moving Forward**
 - **Projects?**