

Korea and Finland

A Comparative Analysis of Broadband Diffusion Factors
FISTERA Final Conference
Seville
16 June 2005

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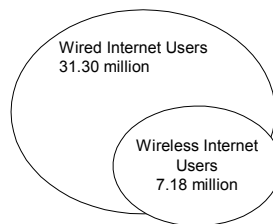
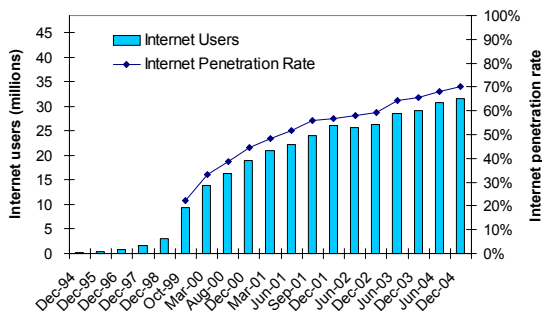
The Questions:

- What were the key factors that made **The Republic of Korea** the global leader in broadband Internet use?
- Are these factors relevant today, and in different countries?
 - For example, do they explain the diffusion in the fastest growing broadband country today (i.e. **Finland**)?
- What new factors have become relevant?
- What are the policy implications?

The Methodology

- Review of previous studies
- Comparative analysis of statistics
- Primary research and interviews

Internet Users in Korea



December 2004

12 million broadband subscribers in March 2005

The Korea Story

- Broadband competition starts in 1998, with rapid expansion of ADSL in 1999.
- Korea becomes the leading broadband country in 2000 and stays number one
- Strange cultural factors attract global attention, including PC Bangs, multiplayer games, rapid expansion of mobile internet use
- Policy-makers develop innovative long-term information society policies and instruments
- Planning based on long-term industrial, economic and social policy goals
- Korea becomes a showcase of how developing countries can develop through ICT
- Europe wakes up and starts to run after the electric rabbit

Korea: Social and cultural factors

	Lee, O'Keefe & Yun, 2003	Park & Yoon, 2005	Lee, N-C., 2002	ITU, 2003	DTI, 2002	Kim, T-G., 2005
Socio-cultural environment						
demography		homogeneous ethnicity; shared language				
purchasing power	low subscription prices; flat fee subscription; low-cost access through PC Bangs					
geography	high-density dwellings; closeness to local exchanges		unique urban geography	80% in urban areas; 48 % in large apartments	80% in urban areas, 49% in large apartment buildings	urban structure, high-rise apartment buildings close to switching stations
human capital	dial-up users; PC Bangs; online gaming			high level of education	PC Bangs as a location of skill development	
absorptive capacity	existing dial-up users				PC Bangs as commercial market for content developers	
values	"keeping up with neighbors"; competitive enthusiasm for children's education; preference for using the Internet for social communication	shared values				
latent demand		unsatisfied dial-up online customers; entertainment for early-adopters, e-commerce for majority	demand for entertainment and network games; existing dial-up users		education, games, access to information, financial transactions, time-shifted TV content, on-line communities	1998 Miss Korea sex video
timing	1997 financial crisis; Internet boom					

Korea: Policy factors

Public sector policy						
awareness building	"Ten million People Internet Education Project"; Cyber Building Certificate system; BB service provider benchmarking and monitoring		"Ten million People Internet Education Project"; Information Education Centers at post offices and schools; mobile education centers; Cyber Building Certificate system		provision of free IT training, wide-scale promotion of the benefits	
demand aggregation		free BB access at schools	KII-Government BB backbone, Internet service to non-profit organizations		provision of BB for schools	
lead user					construction of high-capacity backbone	
financial and investment policies	subsidies for training institutes	investments in the national broadband core network; support for the provision of cheap Internet PCs	KII-Private; KII-Government; KII-Test bed; R&D funding; prime rate loans for access network investments	financial support for target areas; rotation of license fees back to the ICT sector	soft loans, subsidies to low-income households	soft government loans in exchange for low flat-rate pricing
regulation	deregulation; hands-off policy for value added ISPs		market competition through deregulation on entry and pricing; BB Internet service regulated as value-added service (free of regulation)		deregulation; encouragement of facilities-based competition; low need for regulation due to the absence of local loop bottleneck; government push for low subscriber prices	import restrictions for Japanese console games
research policy				high-level cooperation between gov. and the private sector	R&D funding	
content policy		provision of educational content				

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Korea: Private sector actions

- Skipped to save time
 - Industry competition
 - Technology supply
 - Service supply

- See the forthcoming BREAD report

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Finland: Some Internet Milestones

- **1978:** The Finnish Technology Committee introduces the theme of "Information Society" (inspired by *Nora – Minc: L'Informatisation de la société*)
- **1988:** Finland gets access to NSFNET/Internet, in a joint effort by Nordic countries (first countries to join the net: .ca, .sw, .dk, .no, .ic, .fi, .fr)
- **1988:** Jarkko Oikarinen distributes IRC (Internet Relay Chat, University of Oulu)
- **1988:** Online share trading starts in Finland
- **1991:** Linus Torvalds distributes the first version of Linux (University of Helsinki)
- **1992:** First graphical WWW-browser developed (Erwise, Helsinki University of Technology)
- **1992:** FUNET and Helsinki University of Technology launch the 5th and 8th WWW – servers in the world,
(first three are CERN, 4th is Dutch High-energy physics)
- **1993:** The First "Information Society Strategy." Focus on information and communication technologies and related competencies (similar to NII).
- **1993:** A "driver license" for information networks (consists of seven modules)
- **August 1998:** Finland is the first country where mobile phone penetration exceeds 50% of the population

The Finland Story

- Became famous as a leader in the Internet diffusion
- Rapid economic growth generated by ICT industries (Nokia et co.)
- Constantly among the leading countries in information society development indices (e.g., #3 in WEF 2004 Network Readiness Index, after Singapore and Iceland; Korea # 24, after United Arab Emirates)
- Faster economic and productivity growth than in the US, rapid growth in ICT industries and non-industries (Linux)
- The European electric rabbit (together with Ireland)
- "The Finnish model," as an alternative to the Silicon Valley model
- Strange social and cultural factors, including speechless people dancing tango & flamenco, talking to mobile phones, in the centre of the periphery
- Slow broadband start, but fastest growth of broadband connections in the world during the last two years
 - 500,000 in January 2004
 - about 750,000 in December 2004
 - 950,000 in May 2005.
- Almost 20 broadband subscriptions per 100 inhabitants. About 95 percent of households were within the reach of broadband services, in most regions the coverage was close to 100 percent, and 36 percent of households subscribed to broadband in May 2005

Similarities

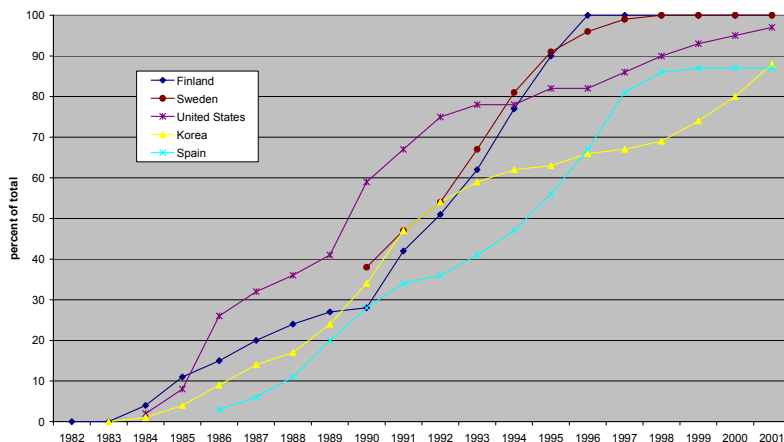
- Homogenous culture
- High-level of education and literacy
- “Engineering-oriented” cultures
- Strong development-orientation expressed through knowledge society visions and policies
- High level of ICT penetration, including mobile phones
- Information Society policies as central development policies, developed across ministries and stakeholder groups

Differences

- Population, demographics and geography
 - 48.6 million vs. 5.2 million
 - 98,190 km² vs. 304,473 km²
 - 495 persons per km² vs. 15 persons per km²
- Average income levels: \$19,200 vs. \$29,000 per capita (2004, ppp)
- Timing of Internet launch: about 7 years
- PC Bangs vs. no PC Bangs
- “The Korean intranet” vs. Internet
- Local loop competition (including unbundling of cable TV)
- Industrial policy
- Earmarked license fees vs. no license fees

- Low and high levels of communication and cultural hierarchy?

Digitalisation of access lines



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Finland: Broadband subscriber fees

Bit rate	Average monthly fee, 1 Jan 2005, €	Price change 2004	Price change 2003
256/256	21	-48%	-22%
512/512	26	-46%	-25%
1000/512	33	-44%	-40%
2000/512	47	-48%	

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One final slide on conclusions

- The factors for broadband diffusion and use have changed
- Critical factors are contextual: they depend on place and time
 - The famous example: the Korean housing structure
- If you want to find the drivers, find the actors (not buildings)
- If you want to speed the diffusion, align strategic interests of the actors