



L I R N E . N E T

Learning Initiatives on Reforms for Network Economies

Improving access to ICTs via alternative regulatory and other interventions

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Overview

- LIRNE in Europe
- The case of Denmark
- EU policies
- Conclusions



LIRNE in Europe

- CICT (DTU) → CMI (AAU)
 - William Melody, Knud Erik Skouby, Reza Tadayoni, Morten Falch, Anders Henten
- Media@LSE
 - Robin Mansell, Claire Milne, David Souter
- Economics of Infrastructures, TU Delft
 - Wolter Lemstra, Vic Hayes, others

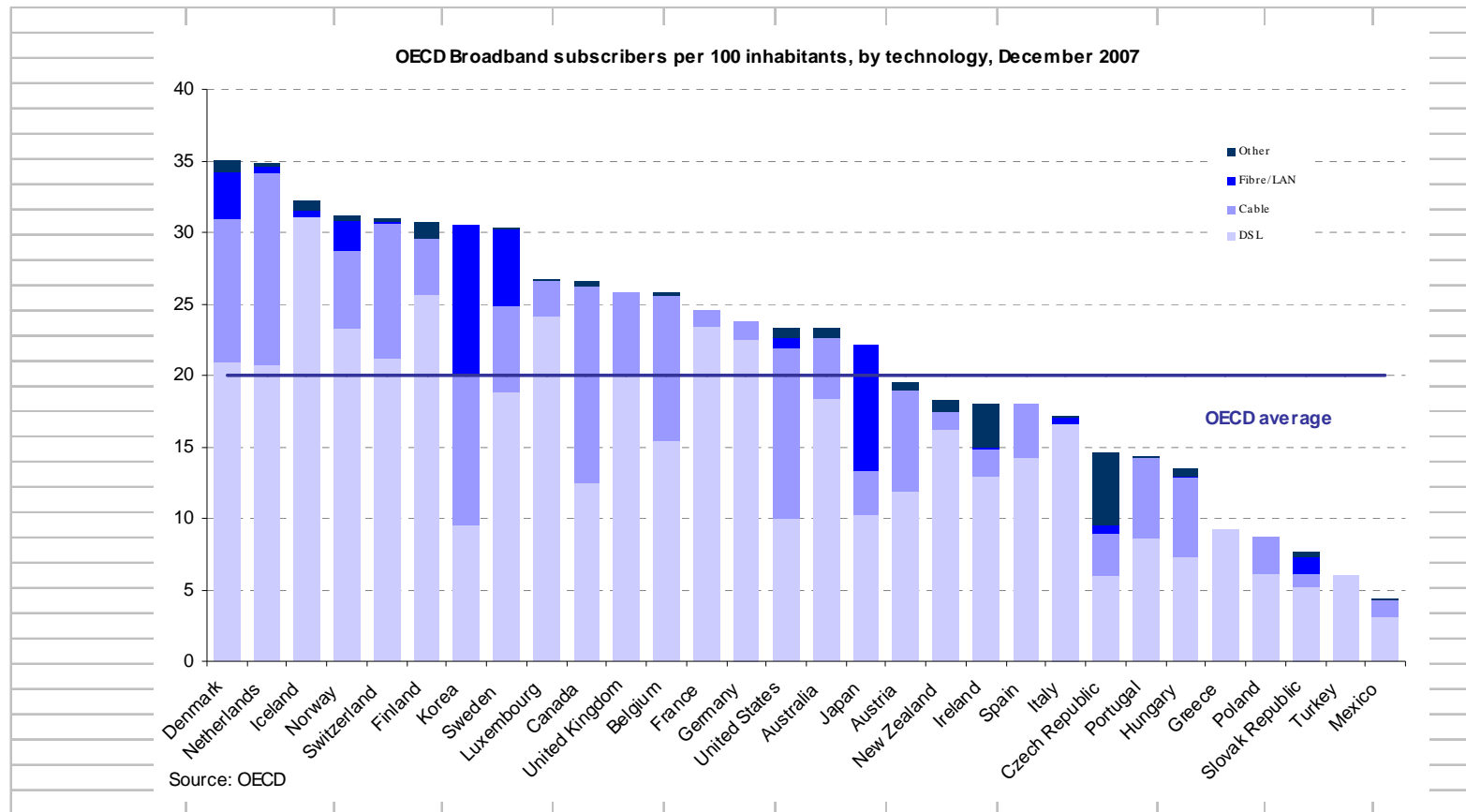


Contribution

- LIRNE in the early period: South-North
- Later: South-South is the crucial axis, but South-North is also important
- LIRNE in Europe:
 - Work on economically poorer countries
 - Just as important: Experiences from economically richer countries
 - All 3 centres in Europe work on both aspects



OECD: Broadband diffusion, end 2007





Main telecom indicators for Denmark, end 2007

Hovedtal

Main indicators

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Tabel 1.
Table 1.

Hovedtal, 2005-2007
Main indicators, 2005-2007

Ultimo / End of	1. H. 2005	2. H. 2005	1. H. 2006	2. H. 2006	1. H. 2007	2. H. 2007
Abonentlinjer – fastnet (1.000) <i>Subscriber lines – fixed network (1,000)</i>	3.403	3.348	3.225	3.099	2.974	2.824
Abonentlinjer pr. 100 indbyggere – fastnet ¹ <i>Subscriber lines per 100 inhabitants – fixed network²</i>	62,8	61,7	59,3	56,9	54,5	51,6
Afgående fastnettrafik ³ inklusiv IP- Telefoni (mio. min.) <i>Outgoing fixed line traffic⁴ including IP-Telephony (mill. minutes)</i>	7.322	6.614	6.279	5.521	5.279	4.821
Afgående fastnettrafik eksklusiv IP-Telefoni (mio. min.) <i>Outgoing fixed line traffic excluding IP-Telephony (mill. minutes)</i>	7.282	6.511	6.100	5.248	4.847	4.369
Bredbånd-abonnementer ⁵ (1.000) <i>Broadband subscriptions⁶ (1,000)</i>	1.165	1.344	1.585 ^{**}	1.735	1.853 ^{**}	1.977
Bredbånds-abonnementer pr. 100 indbyggere <i>Broadband subscriptions per 100 inhabitants</i>	21,5	24,8	29,2	31,9 ^{**}	34,0 ^{**}	36,1
xDSL-abonnementer ⁷ (1.000) <i>xDSL subscriptions⁸ (1,000)</i>	732	836	950 ^{**}	1.063	1.143 ^{**}	1.207
Kabelmodemabonnementer (1.000) <i>Cable modem subscriptions (1,000)</i>	418	462	493	510	532	542
Mobilabonnementer ⁹ (1.000) <i>Mobile subscriptions¹⁰ (1,000)</i>	5.211	5.449	5.634	5.828	6.113 ^{**}	6.243
Mobilabonnementer pr. 100 indbyggere <i>Mobile subscriptions per 100 inhabitants</i>	96,2	100,4	103,7	107,0	112,0 ^{**}	114,0
UMTS-abonnementer (1.000) <i>UMTS-subscriptions (1,000)</i>	117	...	194	327	491	666
Afgående mobiltrafik ¹¹ (mio. min.) <i>Outgoing mobile traffic¹² (mill. minutes)</i>	3.144	3.341	3.693	3.876	4.222	4.482



Why is Denmark among the leaders?

- Was Denmark out early? No
 - First 'information society plan' out 1994
 - Telecom sector liberalised 1996
- Is there a large ICT manufacturing industry? No
- But focus on use of ICT
- Active policies in many areas relating to the use of ICT
- For instance
 - Home computers and Internet access paid by employers
 - Electronic invoices when dealing with public organisations
 - Policy aiming at 'open standards'



Other explanations and issues

- Highly vibrant economy for a long period
 - Cause and effect?
- Industry structure with many SMEs
 - Networked structure among companies
- The broad context
 - Important to examine the whole innovation system
- Flexible regulatory policy
 - Infrastructure and service competition
 - Competition: Incumbent has not been the first innovator, e.g. xDSL and 3G



EU policies

- Two different approaches
 - Universal service obligation
 - Implemented for PSTN and telephony at the time of liberalisation
 - Considered extended to mobile and broadband
 - Lisbon process
 - Focus on the broader context
 - Focus on supply and demand for broadband access and services



EU policies

– the (slightly) broader context

- Many different elements go into the overall policy
- Liberalisation and harmonisation
- Industry policy elements
- Infrastructure and content are regulated separately
- Although closely related, information society, telecom, and media policies are distinct elements
- Not one overall convergence policy, but a still higher level of convergence of related policy areas



Categories of policy initiatives

- Strengthening and harmonisation of internal use in public organisations
- Developing public communication networks and services relating to citizens and businesses
- Facilitation of the development of communication networks and services
- Regulation proper, setting the 'rules of the game'
- Support for demand
- Support for supply



Industrial policy elements

- Conceptually related to support for supply, but also demand
- Support for demand
 - Seen as more acceptable
 - Public procurement
 - Education
 - Other example: Computers and access paid by employers supported by tax rules
- Support for supply
 - Establishment of publicly owned networks
 - Public R&D
 - Innovation: Science parks etc.
 - De jure standardisation
 - Education



Conclusions

- From universal telephone service to broadband access
- From USO policy to broader measures
- Wide variations between European countries
 - Policies do play a role
- To what extent can countries learn from one another?
 - Direct transfer not possible, but local / national adaptation is possible