Why E-Policy Matters: New ICT Indicators for Knowledge Economy

UNCC, Bangkok, 6-8 November 2007

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Q&A. Is car a mobile ICT product?

If so, what classification should apply?
Example: 30% of Car Value = ICT components
Convergence on Knowledge Economy

- Digital broadcasting
- Telematics
- Home networking
- Intelligent robots
- Digital Contents

KE Integration
- Integrated Nano technology
- Digital Bio technology
- Home Space technology
- Ubiquitous banking services

KE integrated PC
- Mobile Personal Kit
- Super Convergence Network (ScN)

Ubiquitous Flexible Display
- KE Convergence Era

Source: ESCAP secretariat based on NCA 2006
Analytical Framework on Techno-Regulatory Convergence
Digital Tobin’s q?

1. **Tobin’s q:**
   Market value of K / Replacement cost of K
   
   $\frac{MPK}{1 + r}, \ 0 < q < 1, \ q > 1$
   
   $\frac{MPK}{1 + r} = 1 + p$ (p = additional cost)

2. **Digital Tobin’s q:**
   Market value + Digital Marketplace value of K* / 
   Replacement cost + Digital replacement cost of K*
   
   $\frac{MPK}{1 + r} = 1 + p + d$ (d = digital cost: efficiency, effectiveness, equity)

Source: DWC 2002
KE Technology Progress Vs. Digital Tobin’s q: Impact of ICT policy on p, d (supply & demand)

Output $k^*$

Output $k$

$1 + r + (p + d)$

Capital Stock

Source: DWC 2002
KE Technology Progress Vs. Digital Tobin’s q: Impact of ICT policy on p, d (supply & demand)

Output $k^*$

Output $k$

$1 + r + (p + d)$

Capital Stock

Source: DWC 2002
Techno-legal convergence for KE

![Diagram showing Techno-legal convergence for KE](source: DWC 2002)
Contribution of KE Policy on Techno-Regulatory Convergence

- Conventional ICT Indicators: 1+p1
  - P1=ICT infrastructure

- New ICT Indicators: 1+r+p*+d
  - r=economic policy
  - p*=ICT infrastructure
  - d=digital rights management
  - Examples of d:
    - Cyberspace disputes: data protection, digital rights management
    - Technical innovation: odrXML, digital certification recognition
    - Legal framework: cross-border jurisdiction and applicable law

- New ICT Indicators for KE: 1+r+p*+d+p**+kd
  - p**=new technology infrastructure (bio, nano, etc.)
  - kd=knowledge-based rights management
E-Policy and New Indicator Areas:

Investment $p$, digital rights management $d$

Output

$1 + r + p + d$

Capital Stock

$1 + r + p + d$

Source: DWC 2002
The Case of Mobile Economy in Asia

Network Effect

Internet

PC

Mobile

New Technology

1990 2000 2010

Source: DWC 2001
Global Trading System (GTS) = f(MTS, DTS)

MTS: Multilateral Trading System
DTS: Digital Trading System
WTO E-Commerce Programme

- Dispute Resolution
- Secure Transaction
- Data Exchange
- Financial Services
- Competition Policy
- ITA
- Trade Facilitation
- International Trade
- E-Commerce
- Cyber Business
WIPO Digital Agenda

- Dispute Resolution
- Secure Transaction
- Data Exchange
- Patent Coop Treaty
- WCopyR.Treaty
- WPerfor.Phono Tr
- Artit.Media Centre
- gTLDs
- Hague Ind. Design
- Madrid Marks
- International Trade
- E-Commerce
- Cyber Business
- Global Licensing of Digital Assets (study)
Example: ICT
GTS=f(MTS, DTS)
Thus,

- E-Policy matters for ICT Development
- ICT matters for KE Development
- ICT Indicators need to be in the new Context
- ICT Indicators for KE requires further work (eg. OECD, EU, ESCAP)
- Regional cooperation is a key factor.
- ESCAP mandate on multisectoral economic development bodes well with ICT/KE policy issues
- International cooperation needs to be further enhanced.

- Thank you