Trends in Telecommunication Reform 2016: Regulatory Incentives to Achieve Digital Opportunities

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We ARE a Smart Connected Society

- 1994: 360,000 people start using mobile for the 1st time
- 2015: 3000 petabytes of IP traffic
- 16m hours of video watched
- 2b+ people on social media
- 205b emails sent

Source: ITU.
Global ICT Developments, 2001-2015

Per 100 inhabitants

- Mobile-cellular telephone subscriptions
- Individuals using the Internet
- Fixed-telephone subscriptions
- Active mobile-broadband subscriptions
- Fixed (wired)-broadband subscriptions

Note: * Estimate
Source: ITU World Telecommunication /ICT Indicators database
History of the Future

One to many to any: ICTs from happy few to the masses

- Mainframe (1 computer, > people)
- PC (1 person, 1 computer)
- Digital native computing (1 person, > screens)
- Internet of everything

Volumes, M


- Internet born
- www
- Social Media
- Connected car
- Internet of things
- Mass wearables
- Cognitive computing
- Artificial intelligence

Source: ITU.
Online Activities

Active users by social platform, January 2015 (in millions)

Engagement in on-line activities

Source: ITU

Source: EC Digital Agenda Scorecard 2015
• The dawn of the **global digital economy** has opened the way to a ladder of regulation or five generations of ICT regulation

• The interaction of the **ICT sector for stimulating growth** in the digital economy alongside other sectors needs to be understood

• **New** kind of **policy and regulatory frameworks** are needed

• It is essential to have a clear understanding of the complex relationships between regulatory policies and ICT growth

• Need to **quantify trends** and learn from successful experiences
The ICT Tracker

Source: ITU ICT Regulatory Tracker, 2015
ICT Regulatory Tracker

(Complete set of data available)

Generations of Regulation

**G1: Regulated public monopolies** without an independent regulator

**G2: Basic reform**, including the creation of separate regulatory bodies, partial liberalization and privatization across the layers

**G3: Regulation for enabling investment**, innovation and access, with focus on stimulating competition

**G4: Integrated regulation**, with an evolving role of the regulator as a partner for development and social inclusion

**G5: Collaborative regulation**, with the need to define the foundation, platforms and mechanisms for working with other sector regulators to help achieve the Sustainable Development Goals

Source: ITU
The Role of Regulation

Which Regulations Shaped the ICT Sector from 2006 to 2016?

Source: http://www.itu.int/tracker
Winning formulas for mobile broadband

- Competition in mobile broadband
- Competition in international gateways
- Mobile number portability enabled
- Band migration allowed
- Infrastructure sharing for mobile (either allowed or mandated), including MVNOs
- National broadband plan adopted
Winning formulas for fixed broadband

- Competition in DSL/cable
- Fixed number portability enabled
- Infrastructure sharing for fixed either allowed or mandated
- Converged licensing framework in place
- National broadband plan adopted

Source: ITU
Ecosystem Needs

Image of wind turbines and solar panels for energy.

Image of a medical professional holding a stethoscope, symbolizing health.

Image of a student holding a book, symbolizing education.

Image of a financial transaction, symbolizing finance.

Image of a farmer tending to crops, symbolizing agriculture.

• The digital divide is shifting from basic telephony to Internet
• Half of all mobile phones are now broadband-enabled
• Competition among next-gen technologies is intensifying
• Roughly half the Commission’s targets were achieved by the original end-date of 2015.
• The overall digital gender divide has grown slightly.
The digital divide is shifting from basic phones to Internet, with mobile broadband a key driver of growth in Internet access – half of all subscriptions now broadband-enabled:

**Projected Global Totals, 2016 Year End**

- Population
- Mobile subscriptions
- Unique Mobile Subscribers
- Mobile broadband
- Fixed broadband

**Remaining No of Unconnected People**

**Internet users**

Source: ITU.
3G - 4G

Number of countries with live 3G/4G networks

Source: ITU.
Next-Generation Satellite

Source: Eutelsat Intelligence.
National Broadband Plans

Source: ITU.
National Broadband Plans

Source: ITU.
Targets – Affordability

Source: ITU.
Household Access

Source: Parks Associates, ITU.
Individual Access Continues to Increase

![Graph showing individual access trends]

Per 100 inhabitants

- **World**
- **Developing**
- **LDC**

60% of the population should be online

Source: ITU.
ITU/BDT Regulatory Activities

Global Symposium for Regulators (GSR-16)

Trends in Telecommunication Reform 2016: Regulatory Incentives to Achieve Digital Opportunities

- Investment strategies to foster the deployment of broadband and access to the digital economy,
- Network sharing and co-investment regulation,
- Regulation and the Internet of Things (IoT),
- Interoperability in the digital ecosystem,
- Smart regulation to facilitate m-services and applications uptake and diffusion

Broadband Thematic reports
Publications on economic and Finance

www.itu.int/treg
Global Symposium for Regulators (GSR)

- GSR brings together heads of national telecom/ICT regulatory authorities from around the world and has earned a reputation as the global annual venue for regulators to share their views and experiences on the most pressing regulatory issues they have identified.
- GSR fosters a dynamic Global Industry Regulators Dialogue (GRID), between regulators, policy makers, industry leaders and other key ICT stakeholders.
- GSR’s Global Dialogue provides a neutral platform for ITU-D Sector Members to share their views on major issues facing the ICT sector.
- GSR includes a series of pre-events:
  - A Thematic Pre-Conference
  - The Private Sector Chief Regulatory Officers Meeting
  - The Regulatory Associations Meeting
Global Symposium for Regulators (GSR)

15 Annual Editions of GSR since 2000

- GSR2000: Establishing a regulatory body
- GSR2001: Effective regulation
- GSR2002: Promoting Universal Access to ICTs
- GSR2003: Promoting Universal Access to ICTs
- GSR2004: Licensing in an era of convergence
- GSR2007: The Road to Next Generation Networks (NGN): Can regulators promote investment and achieve open access?
- GSR2005: Developing a new regulatory framework to promote broadband deployment and access in developing countries
- GSR2008: Six degrees of sharing: Innovative infrastructure sharing and open access strategies to promote affordable access for all
- GSR2009: Hands-on or Hands-off? Stimulating growth through effective ICT regulation
- GSR2010: Enabling Tomorrow’s Digital World
- GSR2011: Smart Regulation for a Broadband
15 Annual Editions of GSR since 2000 (cont.)

- **GSR 2012**: Why regulate in a Networked Society?
- **GSR 2013**: 4th-Generation Regulation: driving digital communications ahead
- **GSR 2014**: Capitalizing on the potential of the digital world
- **GSR 2015**: Mind the Digital Gap - Regulatory incentives to achieve digital opportunities

**Global Symposium for Regulators (GSR)**
Global Symposium for Regulators 2016

Under the theme “Be empowered, Be included: Building Blocks for Smart Societies in a Connected World”, this year’s programme includes compelling discussions and debate around:

- Artificial intelligence, smart sensors & smart networks
- Digital financial inclusion – the challenges of bringing the unbanked online
- The regulatory road towards the ‘Internet of Things’ and M2M communications
- New digital platforms – empowering or enslaving?
- Privacy, trust and cybersecurity
- Strategies to encouraging digital entrepreneurship

For more information: www.itu.int/gsr16
Regulators were invited, as part of the GSR consultation process, to identify pro-active collaborative policy and smart ICT regulatory measures needed to facilitate access to and the development of digital financial services:

- identify topics of relevance to stakeholders of the digital finance ecosystem,
- addressing regulatory overlaps between the ICT/Telecommunication and Financial Services sectors,
- defining new regulatory approaches to ICT/telecommunication policy and regulation, in particular in an era of collaborative regulation.

Best Practice Guidelines Available here:
GSR-16 themes and related discussion papers

- Building blocks for smart societies in a connected world: A regulatory perspective on 5th generation collaborative regulation
- Emerging technologies and the global regulatory agenda
- The race for scale: market power, regulation and the App economy
- Maintaining trust in a digital connected society

www.itu.int/en/ITU-D/Conferences/GSR/Pages/GSR2016/Papers.aspx
GSR-16 best practice guidelines

GSR-2016 Best Practice Guidelines

The overarching theme of the 16th edition of GSR being "Be Empowered, Be Included: Building Blocks for Smart Societies in a Connected World", participants engaged in a global constructive dialogue to explore synergies and ways to strengthen collaboration and cooperation between the telecom/ICT and financial sectors. The aim was to identify smart ICT policy and regulatory measures needed to enable collaborative regulation and an inclusive dialogue across sectors, this year focusing in particular on fostering an enabling environment for access to inclusive digital financial services, especially for the underserved and underbanked.

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Contributions were coordinated by H.E Yasser Elkady, Minister of Communications and Information Technology, and Chairman of the Board of Directors, National Telecommunications Regulatory Authority, Egypt and GSR-16 Chair.

Best practice guidelines
PDF
English, العربية, 中文, Español, Français, Русский
Organized by: ITU, in collaboration with the Bill & Melinda Gates Foundation, the Alliance for Financial Inclusion (AFI), the Government of Egypt and other partners

Participants: Over 510 from around the world including chief executives, ministers, and representatives of financial and telecoms regulatory agencies, tech private-sector leading companies and regional organizations

Topics: Digital Financial Services: The State of Play • Prospects and challenges: getting it Right • Shaping Collaborative Approaches to Promote Digital Financial Services • Collaborative guiding measures

www.itu.int/gddfi16
Collaborative Guiding Measures for Inclusive Digital Financial Services

The rapid penetration of mobile phones and the emergence of innovative technology-led business models aimed at providing access to formal financial services through mobile devices especially to underserved and unbanked people emphasizes the need for an enabling regulatory environment for inclusive digital financial services. The complexity of digital and mobile banking models that are expanding the financial services value chain creates an increased need for dialogue and collaboration between the financial sector and telecommunications/ICT sectors, particularly at public and institutional level.

We, the stakeholders participating in the 2016 GDDFI, recognize that targeted collaborative approaches can go a long way towards fostering access, availability, and take-up of robust, secure and affordable digital financial services. Therefore, we have identified the following policy, regulatory, and business collaborative guiding measures to move forward the digital financial inclusion agenda by building synergies at the national, regional and global levels.

1. Develop an inclusive ECOSYSTEM for Digital financial services.
   Telecommunication and financial services regulators need to collaborate to develop consistent and proportionate regulatory frameworks in order to develop a competitive and innovative digital financial ecosystem where different providers have the possibility to leverage their unique assets and capabilities to serve the bottom of the pyramid. The ecosystem consists of users (consumers, businesses, government agencies and non-profit groups) who have needs for digital and interoperable financial products and services; the providers (banks, other licensed financial institutions, and non-banks) who supply those products and services through digital means; the financial, technical, and other infrastructures that make them possible; and the governmental policies, laws and regulations which enable them to be delivered in an accessible, affordable, and safe manner.
   The DFS ecosystem aims to support all people and enterprises within a country, and should support national goals including financial inclusion, economic health, and the stability and integrity of the financial systems.
   An important over-arching issue in the development of the DFS ecosystem is the need to invest in and manage two sides of the eco-system at once. Practically, this means both supporting initiatives to lead electronic money into consumer transaction accounts - principally through bulk, or GDP payments and initiatives to enable consumers to spend this money in electronic form, principally through the enshrinement of merchant electronic payment acceptance.

2. Encourage INTEROPERABILITY
   The possibility for users worldwide to make electronic payment transactions with any other user in a convenient, affordable, fast, seamless and secure way via a single transaction account is likely to further promote financial inclusion while increasing efficiencies and competition in the marketplace.
   Telecommunication and financial regulators and market players have a role in driving interoperability and also encourage shared access to digital platforms aimed at promoting financial inclusion. We encourage interoperability at different levels such platforms, access points, agents and customers.

3. Encourage public private PARTNERSHIPS
   Collaboration and partnerships are critical due to the broadening of the value chain and the participation of an increasing number of actors in the digital financial ecosystem such as banks, telecommunication operators,
The 16th edition of Trends examines:

- Investment strategies to foster the deployment of broadband and access to the digital economy,
- Network sharing and co-investment regulation,
- Regulation and the Internet of Things (IoT),
- Interoperability in the digital ecosystem,
- Smart regulation to facilitate m-services and applications uptake and diffusion.

Available from the ITU bookshop at: www.itu.int/pub/D-PREF-TTR.17-2016

Other regulatory, finance and economic publications available at:
www.itu.int/pub/D-PREF
THANK YOU FOR YOUR ATTENTION !!!!

More Information

- Telecommunication Development Sector
  - http://www.itu.int/ITU-D/

- ICT Regulatory Tracker
  - http://www.itu.int/ITU-R/

- ITU ICT Eye
  - http://www.itu.int/icteye/

- Publications on Economics & Finance

- ITU Europe Coordination Office
  - http://www.itu.int/itu-d/