

# OTT

**Alison Gillwald**

Research ICT Africa and University of Cape Town

**Parliamentary hearing on OTT services**

Cape Town, 26 January 2016



# Content

To identify the challenges of evidence-based policy formulation and safeguarding public interest outcomes in relation to OTT services

- ▶ Locating OTT in new ICT system
- ▶ Harnessing the economic and social impacts of the Internet
- ▶ Regulation, investment and innovation
- ▶ What are OTTs?
- ▶ Why are operators concerned about the rise of OTTs.
- ▶ Net neutrality and zero rating
- ▶ What are the harm issues?
- ▶ What if the evidence, if there is any?
- ▶ What is to be done?

# ...To complex ICT ecosystem

Internet as a global distribution network, stimulated by convergence between media, telecommunications and IT, facilitated the provision of content (audio visual) over converged IP networks, across multiple devices, with layers of governance at the international, regional and national level.



# Complex adaptive systems/regulation

- ▶ ICT ecosystem characterised by exponential technological development and increasing dependency on connectivity for positive social and economic national outcomes.
- ▶ Complex adaptive systems that innovative to circumvent bottlenecks often through disruptive competition
- ▶ Need to move from regulation of static linear value chain to adaptive, flexible regulation that does not stifle adaptiveness, and innovation.
- ▶ Competition regulation (static efficiency) to understanding dynamic, complementary relationship between different elements in ICT ecosystem
- ▶ Unintended outcomes of instrumental regulation for one objective (competition) produce negative outcomes in other (eg. Innovation)

# Changed market conditions

- ▶ Saturated voice markets shifting to data
- ▶ Introduction of low-end smart phone driving data
- ▶ Declining revenue from traditional services
- ▶ Operators face becoming ‘dumb pipes’
- ▶ Multiple new business models emerging from data competition to retain and attract new customers
- ▶ Zero-rated services, social media bundles, blended bundles, build-your-own-bundle.
- ▶ Multiple user strategies to access and use Internet – substituted voice and text data services, public wifi for updates, U-tube.

# Zero rating and net neutrality

- ▶ Net neutrality every packet of data on the Internet should be treated equally when it is routed irrespective of what content is in that packet, who sends it and who is going to view it. Nothing should be throttled, or downgraded in speed, or blocked.
- ▶ Generally, this has been applied as a competition issues, on technical (quality of service) and price grounds.
- ▶ In practical terms it can never be applied absolutely. Simply managing network congestion requires, treating time sensitive data like voice, video differently from e-

# Key regulatory issues?

- ▶ Where will market power, possibly even monopoly, be a persistent problem?
  - ▶ Higher likelihood in fixed than in wireless markets.
  - ▶ Higher likelihood in access than in services markets (civil engineering infrastructure as a bottleneck)
  - ▶ Higher likelihood in sparsely populated and/or regions with low purchasing power
  - ▶ Significant market concentration in new economy and information markets (e.g., search)
- ▶ Where can regulation improve outcomes?
- ▶ Which instruments (especially in fast-changing markets)?
- ▶ How can regulation best cooperate with other policy makers (e.g., competition authorities, economic development)?

# Reform 0.2 - From static to dynamic regulation

Creating conditions that facilitate high capital investment required for deployment of next generation networks to support innovation

- ▶ Static regulation transition from monopoly to open market (assumes core network infrastructure in place)
- ▶ Structural and conduct regulation at wholesale level (interconnection, unbundling, price regulation).
- ▶ Digitisation and convergence allows for multiple entrants, migration of services and content across platforms
- ▶ High levels of substitution - fixed, wireless, instant messaging, social networking
- ▶ New complementarities - content & apps drive data

# What are OTTs?

- ▶ Originally for the delivery of film and TV content via the Internet, without requiring users to subscribe to a traditional cable or satellite pay-TV service
- ▶ ETNO: A business model which requires infrastructure based service providers to constantly increase their performance (or cut their costs of doing so), while being limited by economic regulation on the revenue side, may not be sustained in the long run.
- ▶ Inters.

# OTT

- ▶ Three different revenue models in tradition broadcast/cable environment:
  - SVOD -Subscription-baseds ervices such as Netflix, Showtime,
  - AVOD - "Free" ad-supported services such as Hulu
  - TVOD – transactional serices uch as iTunes, Vimeo On Demand and Amozon instant video
  - OTT Devices: Apple TV Xbox
- ▶ Classical Competition/regulation issues:
  - Vertical integration/dominance: Downstream/upstream competition, price squeeze,
  - Symmetrical regulation between licensees and OTT - obligations/local content

# OTT in mobile broadband environment?

- ▶ different evolution in mobile broadband and prepaid environment that characterises internet access and use in Africa
- ▶ underlying networks not fibre/cable but mobile broadband networks that have been primarily responsible for delivering broadband, as they did voice service.
- ▶ in mobile pre-paid environment it generally refers to third party services, applications, platforms that are dependent for delivery on the underlying network.
- ▶ They are 'free' only in the sense that users are not required to pay an additional fee over and above their data charges (but obviously the more intensive they are, the more bandwidth users need buy).

# Arising competition/regulation issues

- ▶ Traditional business models and conditions enjoyed by incumbents challenged by introduction of broadband technologies, networks and devices (smart phones) that have enabled low and no-cost voice services (in particular)
- ▶ Hit traditional mobile voice and SMS business models that have driven the revenues of mobile models for two decades.
- ▶ Like fixed line incumbents, some mobile incumbents have resisted shift to new data models but other have embraced these inevitable developments to positive effects.

# Changing business models

- ▶ SA like the rest of Africa, although voice still makes up for a significant portion of revenues, data revenues are growing much faster.
- ▶ Operators still feeling the pinch from declining voice revenues, as data revenues still not exceeding voice, which are being substituted with OTT 'free' voice and text services.
- ▶ Underperforming operators (often incumbents) unable to develop their own content or enter into complementary relationships with the platforms that drive internet use, have been lobbying through industry associations, the ITU for OTT services to be forced to pay operators (on the grounds that they are benefits from operator investment risk).
- ▶ Operators that have embraced new data driven business models and are seeking to optimize net works appear to be moving toward global trends first seen in fixed market of

# Pricing

- ▶ Although data prices, plummeted with increasingly competitive products and services, as new models emerged an operators sought to attract new (data) customers and retain customers, prices in SA have now stabilised.
- ▶ These remain , and still remain far too high for the average pre-paid user to be downloading U Tube or doing software updates off their regular data packages that would drive the take off data services, as they have in jurisdictions where the prices are lower or peoples incomes are on average higher

# Zero rating and net neutrality

# Underperformance

- ▶ Dynamic systems such as the advanced ICT system may be “stuck” in an underperformance state (“attractor”)
- ▶ – Insufficient investment and innovation – Inefficiently high or low prices
- ▶ Multiple causes
  - – Regulatory—regulation outside the workable performance zone (too strict, too lax)
  - – Political—veto players capable of blocking change
  - – Institutional—societal constraints and inertia
- ▶ Can be overcome but only after considerable costs

# Need for new foundations

## **Monopoly regulation**

- Market failure can be identified relatively easily
- Direct effects of regulation can be designed to affect investment, prices, etc.
- Founded in static equilibrium models, game theory
- Economic and social goals may be pursued within one integrated framework
- Regulatory mistakes can be absorbed and corrected, albeit at costs to the system

## **The new ICT system**

- Market failure difficult to identify unambiguously
- Direct and indirect effects of regulation need to be taken into account and may counteract each other
- Founded in dynamic economic models and theory of complex adaptive systems
- Economic and social goals may need separate approaches
- Regulatory mistakes may be difficult to correct

# References

Bauer, J Castells, M. (1999). *The Information Age: Economy, Society and Culture (Vol. 2)*. Oxford: Blackwell.

Castells, M and Himanen, (eds) (2014) *Reconceptualizing Development in the Global Information Age*, Oxford University Press, London.

Evans, P. (1995). *Embedded Autonomy: States and Industrial Transformation*. Princeton: Princeton University Press.

Fukuyama, F. (2005). *State Building: Governance and World Order in the 21st Century (Second ed. Vol. Profile Books Ltd.)*. London.

Schneider, B R (1999) *Desserialista state in Mexico and Brazil* in Woo-Cummings, *The Developmental State*, Ithaca, Cornell University Press, p275-305.

Wallsten, S. (2002). *Does Sequencing Matter? Regulation and Privatisation in Telecommunications Reforms. World Bank Policy Research Working Paper(2187)*