



# **ITU-D Study Groups**

## **Question 3/1 and Question 4/1 joint session on the Economic Impact of OTTs on National Telecommunication/ICT Markets**

Tuesday, 1 October 2019 (Room K, ITU)

**Keynote Address by Dr. Robert Pepper**  
**Session on the Economic Impact of OTTs on National**  
**Telecommunication/ICT Markets**  
**Robert Pepper**  
**1 October 2019**

The writer William Gibson once said “The future is already here — it's just not very evenly distributed.” I think this is particularly true in the communications market. Changes in technology and consumer preferences for OTTs have brought the future to many. However, it now depends on the further evolution of business models and enabling regulatory frameworks to bring the social and economic benefits of this new future to Member States and individuals around the world.

For decades, telecommunications carriers operated with a business model in which the product was voice, the metric of measurement was the minute, and incremental costs (related primarily to time and distance) resulted in incremental charges to the consumer. With today's flat IP networks, the product is connectivity, and the metric is bandwidth. The networks are insensitive to time, location, and distance, and consumers are either connected or they are not.

Telecommunications business models have begun to evolve accordingly. Many carriers have decreased their reliance upon voice and SMS charges and have turned towards data-centric business models. Operators who have adopted data-centric tariff structures enjoy benefits such as reduced churn, increased net promoter scores, more stable in-bundle revenue streams, and the ability to link returns more directly to network investment<sup>1</sup>.

Such business models take advantage of the symbiotic relationship between network operators and application providers - online content and applications drives user demand for broadband access and for data, which drives users to purchase broadband access and more data, and the associated increase in revenues for operators enables them to invest in expanding network capacity and coverage. The Body of European Regulators for Electronic Communications, for example, has recognized that “[u]ltimately, it is the success of the [content and application providers] . . . which lies at the heart of the recent increases in demand for broadband access (i.e. for the ISPs' very own access service).”<sup>2</sup> Without new and innovative online content and applications, the value of internet access to users would be severely reduced.

For their part, providers of OTT applications have an interest in supporting the availability and affordability of high-speed broadband for users around the globe. Rather than merely relying upon network operators to deliver traffic, OTT companies are increasingly investing in network infrastructure themselves. From 2014 to 2018, online service providers (OSPs) invested over USD 29 billion in internet infrastructure including including terrestrial fibre networks, international submarine cables and delivery networks. During the same time, OSPs spent

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<sup>1</sup><https://www.gsmaintelligence.com/research/?file=2014-08-29-rebalancing-the-value-from-voice-and-sms-to-data.pdf&download>

<sup>2</sup> See BEREC, *BEREC's comments on the ETNO proposal for ITU/WCIT or similar initiatives along these lines* (Nov. 2012).

USD16.3 billion on indirect investment, with the largest growth derived from their use of colocation data-centre facilities.<sup>3</sup>

Facebook, for example, provides caching servers to network operators in over 170 countries around the globe. By positioning content closer to end users, these caches reduce latency and relieve pressure on operators' networks. We have also invested extensively in submarine cables. For instance, our investment in the Malbec cable between Brazil and Argentina was the first new cable to land in Argentina since 2001 and tripled the international capacity to the country. Along with partners Airtel and BCS, Facebook invested in 770km of fiber backhaul in rural Uganda, which allowed Airtel to activate 4G connectivity.

While OTT companies and telecommunications operators will benefit from adaptations in communications regulations frameworks, consumers and small businesses stand to benefit the most. This is particularly true in developing countries and for marginalized populations such as women. For instance, WhatsApp has been demonstrated to lower production costs and increase the efficiency of small businesses, improve their customer service, and lower marketing costs. Accordingly, a five percentage point increase in WhatsApp penetration in 2015 was associated with increases in GDP of \$1.1 billion in the Middle East, \$1.0 billion in South America, and \$0.8 billion in Africa.<sup>4</sup>

Furthermore, a recent study found that each 10 per cent increase in usage of rich interaction applications (i.e. OTTs) adds on average US \$5.6 trillion in global GDP.<sup>5</sup> In India, Internet-based applications contributed a minimum of US \$20.4 billion to GDP during 2015-2016 - a number that was expected to grow to US \$270.9 billion by 2020, or nearly 8 per cent of India's GDP<sup>6</sup>.

A study from Facebook, the World Bank, and OECD found that across Africa, small businesses owned or managed by women say that social media such as Facebook helps their business<sup>7</sup>. This sentiment was shared by 85% of women business owners and managers in Nigeria, 88% in South Africa, 92% in Ghana, and 96% in Benin. The World Bank's Digital Development partnership reported that users in Southeast Asia turn to social media as their key source of information when making purchasing decisions. 78 percent of consumers in Asia get information about products and services on social media, and 68 percent share that brand-related information on social channels, which helps small businesses attract and retain customers.

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<sup>3</sup> Infrastructure Investment by Online Service Providers. Analysis Mason, December 2018.

<sup>4</sup> *The Global and Country-Level Economic Impacts of WhatsApp*. Analysis Group. Available at [https://www.analysisgroup.com/globalassets/uploadedfiles/content/news\\_and\\_events/news/2017-analysisgroup\\_whatsapp\\_economic\\_impact\\_report-final.pdf](https://www.analysisgroup.com/globalassets/uploadedfiles/content/news_and_events/news/2017-analysisgroup_whatsapp_economic_impact_report-final.pdf)

<sup>5</sup> Rich Interaction Applications are "applications that are used for a wide range of functions, allowing two parties to interact with each other in a long and growing number of ways." Arnold, René, Christian Hildebrandt, Peter Kroon, and Serpil Taş. "The Economic and Societal Value of Rich Interaction Applications (RIAs)," Wissenschaftliches Institut für Infrastruktur und Kommunikationsdienste GmbH, May 2017: [http://www.wik.org/fileadmin/Studien/2017/CCIA\\_RIA\\_Report.pdf](http://www.wik.org/fileadmin/Studien/2017/CCIA_RIA_Report.pdf).

<sup>6</sup> Kathuria, Rajat, Mansi Kedia, Gangesh Sreekumar Varma & Kaushambi Bagchi, "Estimating the Value of New Generation Internet Based Applications in India," Indian Council for Research on International Economic Relations, July 2017: [http://icrier.org/pdf/Estimating\\_eValue\\_of\\_Internet%20Based%20Applications.pdf](http://icrier.org/pdf/Estimating_eValue_of_Internet%20Based%20Applications.pdf).

<sup>7</sup> Future of Business Survey. Available at <https://dataforgood.fb.com/tools/future-of-business-survey/>

Governments should seek to enable this evolution in business models with an evolution of their own. As ITU Recommendation D.262 states, “Member States should foster enabling legal and regulatory environments, and develop policies that are fair, transparent, stable, predictable and non-discriminatory; and that promote competition, foster technological and service innovation and encourage private sector investment incentives, in order to ensure the continuing growth and adoption of OTTs.”

On the supply side, government policies should seek to lower costs and speed infrastructure deployments. And on the demand side, policies must foster relevance and readiness, such as digital education in local languages, eGovernment services, and low cost or free applications and affordable devices. Connecting the unserved and underserved populations is a complex effort that requires not just bringing network infrastructure to more people, but taking additional steps to solve the affordability, relevance, and readiness/skills challenges that undermine access.

Regulation of OTTs should be considered only where strictly necessary, and must be appropriate, proportionate, and sensible. To the extent that regulation of online communications applications is demonstrated to be necessary, any such rules should be tailored to fit and, in particular, traditional telecommunications regulations should not be automatically extended to applications because of the fundamental differences between network operators and applications. Instead, governments should consider opportunities to reduce regulation for the traditional telecommunications sector where regulations have become outdated or are otherwise no longer necessary. Prudent lightening of regulation can reduce unnecessary overhead for existing operators, attract new entrants, and boost investment by all market participants.

Modern telecommunications regulations should also empower the symbiotic relationship between OTTs and carriers. As D.262 also states, “Member States should encourage mutual cooperation as far as practical between OTTs and network operators, with a view to fostering innovative, sustainable, viable business models and their positive roles in fostering socio-economic benefits.” Examples of such cooperation include unique offers or access to OTTs for network service subscribers and joint investments in network infrastructure.

In summary, the technological evolution of network technology has ushered in an exciting future featuring innovative OTT applications. With the help of enabling regulatory policies from ITU Member States and the further evolution of business models, this is a future in which end users, small businesses, telecommunications operators, and OTT companies alike stand to prosper.