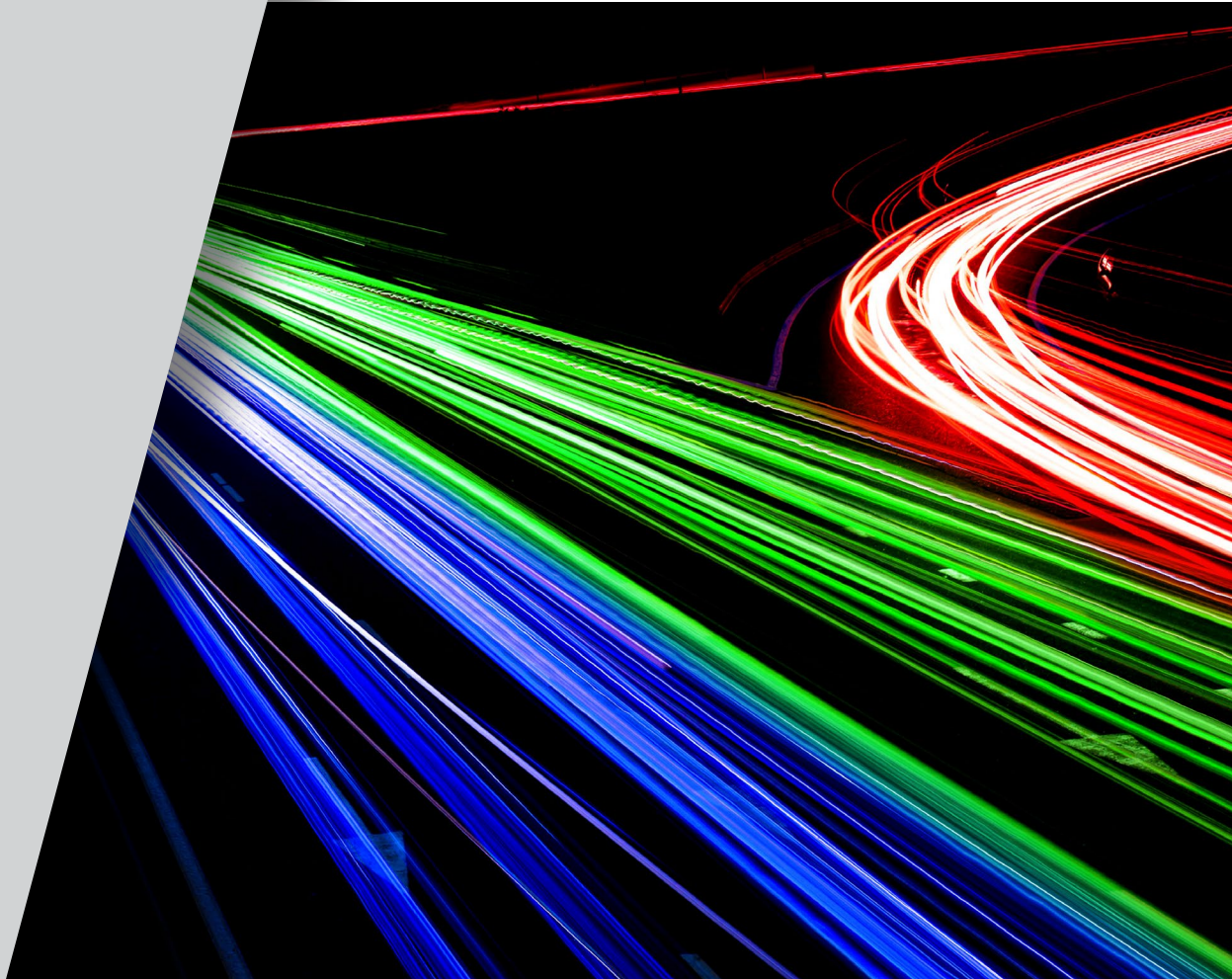# ICC TRMC

REGULATING OVER THE TOP (OTT) SERVICES

… REQUIRES CLEAR ACKNOWLEDGEMENT AND UNDERSTANDING OF THE REALITY OF THE ENCROACHED INTERNET VALUE CHAIN INTO TELECOMS

CENERVA REGULATORY BRIEFING

The Internet Value Chain brings with it OTTs, and much more too

There was a period pre the Iphone (2007) when the telecommunications value chain was just the simple classic vertically integrated 3-layer one of the TDM services layer (voice/SMS services), the network layer and the equipment layer. Then the IP-based Internet and its content-led value chain (see Figure 1) came along with its attractive devices, numerous online services, thousand of apps and unlimited content that wows subscribers – completely "over-running" the erstwhile telecoms 3-layer value chain. These positive benefits for consumers and citizens also include social media apps like Whatsapp, Facebook, Viber, etc. Indeed, all the "Online Services" in the Internet value chain of Figure 1 are all OTT services, and perhaps blowing away the first myth: OTT is not equal to social media apps! E-Retail, streaming, gaming, search and cloud services apps (and more) all also run over-the-top. Rich interactive apps and great devices along with fantastic content which telcos can never produce are being lapped up by subscribers, driving more network demand, but also driving the need for enhanced networks.

Operators have suddenly found themselves delineated to the connectivity layer/segment of the Internet value chain whilst other players dominate other layers. The Internet value chain has supplanted the erstwhile telecoms one with OTTs sitting in a totally different segment (Online Services) whilst operators sit in the connectivity segment. There goes another myth: the different segments should be looked at by regulators differently.
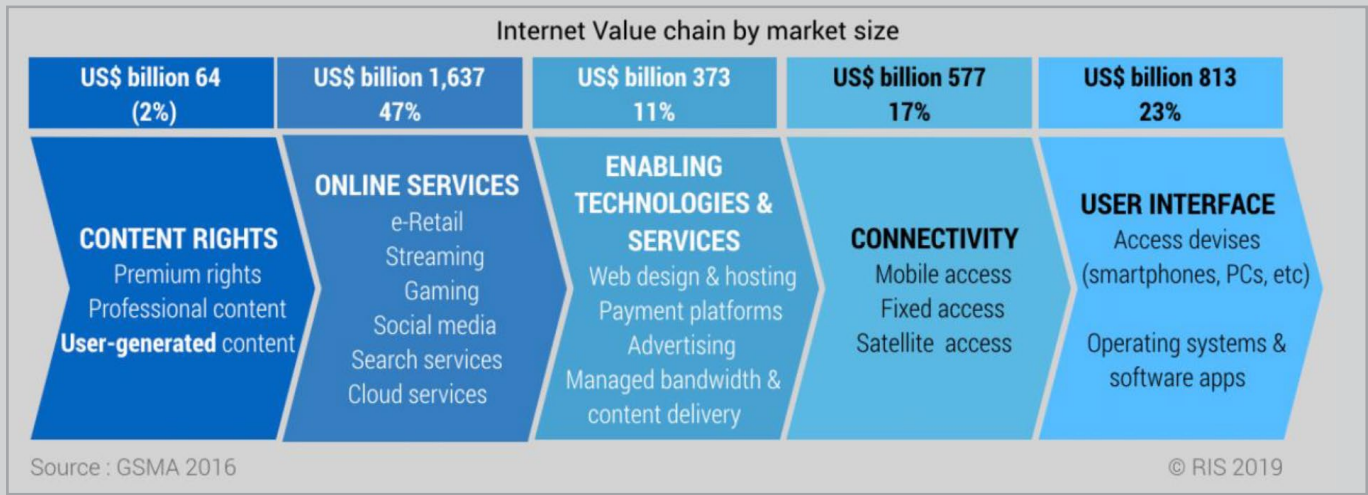
The reality is that consumers and citizens love the positive externalities of this new value chain. However, it must be acknowledged that it comes with many negative externalities too: increased cyber frauds, the breakdown of the interconnection regime through bypasses enabled by IP, increased revenue/tax "leakages" (which irk Governments), content harms, fake news, data breaches, loss/lack of control by regulators of players in their markets and more. All of these are true. So regulators are not only still needed, but they have to regulate differently. The need to rethink telecoms regulation in our newworld of the IP-based Internet value chain is already getting acute: OTTs are just one symptom of such much needed rethinking. Along with the positive externalities of the new value chain comes numerous negative ones too.

Figure 1 – The Internet Value Chain and market size shares in 2015

"The IP-based Internet and its content-led value chain came along with its attractive devices, numerous online services, thousands of apps and unlimited content that wows subscribers... Operators have suddenly found themselves delineated to the connectivity layer/segment of the Internet value chain whilst other players dominate other segments."

"The need to rethink telecoms regulation in our new world of the IP-based Internet value chain is already getting acute: OTTs are just one symptom of such much needed rethinking, along with the positive externalities of the new value chain comes numerous negative ones too."

Regulating OTTs should not deviate from the known primary purpose to regulate… and clear impact assessments are needed

The Cambridge English Dictionary defines regulation as "an official rule or the act of controlling something". More specifically, the key purposes of regulation remain:

(i) to seek to achieve those desirable and justified objectives for consumers and citizens that do not arise naturally from the market and

(ii) regulate where there is 'market failure' and where the result brings net benefit.

There are clear calls from many stakeholder groups to "control" or regulate OTTs, yet the many proponents typically neither point to any market failure nor to any evidence of consumers and citizens being unhappy with their OTT services. A claim like MNOs lose revenues – whether accurate or not – would not count as a good reason to regulate against significant consumer and citizen benefits of OTT services when tested against the above key purposes of regulation. MNOs claim OTTs pay little or no taxes, or that they benefit from MNO investments which they do not pay for (the "free rider problem").

In several countries, these calls to Regulatory and Tax authorities "to do something about OTTs" have led to real negative outcomes (these are from Stork, 20191):

• Uganda: a social media tax of 200 UGX per day ($US 0.05) levied in July 2018 has seen led to an estimated number of Internet users dropped by nearly 30% between March and September 2018. Plus it is clearly a very regressive tax, with significant more drop in Internet users in poorer regions.

• Benin: In September 2018, Benin introduced a new OTT tax (CFA 5 or USD 0.8 cents per Mbyte and 5% tax on airtime) for the purpose of protecting investment in network infrastructure and pushing OTT players to pay regulatory fees/taxes. The regulator claimed CFA 30 Billions turnover (circa US $50M) was lost between 2016 and 2018 due to "the invasion of OTTs". Benin citizens protested and the Government repealed the tax within weeks. Stork (2019) reports that these withdrawn taxes would have resulted conservatively in forgone GDP growth of USD 260 millions and forgone taxes of USD 40 millions. The tax was also regressive.

• Zambia: in August, the Government introduced a 30 Ngwee per day tariff on Internet phone calls, the purpose being to to "protect traditional phone calls" and "jobs in companies such as Zamtel, Airtel and MTN". Zambians protested and the tax is yet to be implemented.

• Colombia: in 2016 the Government imposed VAT on foreign suppliers of digital services (i.e. OTT content), Foreign Service Providers (FSPs). FSPs are required to register in Colombia and pay VAT bimonthly. It turns out that it is not that easy to implement as practically all foreign online services layer players (see Figure 1) are arguably caught by the new tax. The tax has not been implemented, arguably as it is not only controversial but unimplementable.

These above brief examples demonstrate why a rush to regulate OTTs may not meet the test of the key purposes of regulation, and that their implementation may not be trivial to do and enforce anyway. These examples also clearly speak to "Look before you Leap" with OTTs, as no clear (regulatory) Impact Assessments were carried out prior to these taxes being imposed. These should be standard best practice.

"There are clear calls from many stakeholder groups to "control" or regulate OTTs, yet many proponents typically neither point to any market failure nor to any evidence of consumers and citizens being unhappy with their OTT services. A claim like MNOs lose revenues – whether accurate or not – would not count as a good reason to regulate against significant consumer and citizen benefits of OTT services when tested against the above key purposes of regulation."

Regulating OTTs also need clearer and more precise definition of OTT followed by typical regulatory relevant market definitions

One cannot regulate what one cannot clearly define as one falls into the risks of inconsistencies and unfairness at the very least. For example, why single out Social Media in Figure 1 (one of many classes of Online Services) for special tax treatment, and not Online Gaming or Search? There may be some very good reasons (e.g. online harms) to justify such singling out – but this has to be defined. And in any case, not all OTT services are the same. And not all definitions would be good enough to form the basis to regulate (or control) OTTs.

Contrast

• The ITU's (2019) international telecoms focused working definition of OTT: "An application accessed and delivered over the public Internet that may be a direct technical/functional substitute for traditional international telecommunication services2"

with

• BEREC's (2016)3 regulatory focused definition along with some further helpful sub-distinctions: OTT is a "content, a service or an application that is provided to the end-user over the public Internet"

• OTT-0: electronic communication services (ECS) that are able to terminate on fixed-line or mobile networks such as Skype-out calls.

• OTT-1s: are not electronic communication services (ECS) but potentially competing with them, e.g. Whatsapp.

• OTT-2: encapsulates all other OTT services that are not captured by OTT-0 and OTT-1 (e-commerce, video and music streaming etc)

Whilst the ITU's working definition of OTT is meaningful, BEREC's definition and subdistinctions are incredibly more helpful (to regulators), clearer and more precise. This is because

• An OTT-0 ECS service, e.g. a Skype out call which terminates on a mobile or fixed network is potentially subject to ex-ante regulations like termination and roaming ones. An OTT-0 service arguably is thus a substitute with other competing ECS services such as PSTN voice to PSTN voice or mobile to mobile. OTT-0 are subject to ex ante regulation.

• An OTT-1 ECS, e.g. a Whatsapp call, may arguably not be seen as competing with traditional voice calls, or less so – and hence subject to lighter controls or wholesale regulation – if any. OTT-1 may or may not be subject to ex ante telecoms regulations.

• An OTT-2 ECS clearly does not compete with tradiional ECS services and would not be subject to ex-ante

This contrast of definitions demonstrates why clearer and more precise definitions of OTT immensely matter.

And after such a clearer and more precise (hopefully) OTT definition4 – and a clear understanding and acknowledgement of the new Internet value chain – regulators should proceed to understand and define the (as per best practice) OTT relevant markets using the SSNIP test, assess the relevant market, find SMP/dominance, abuse of dominance and determination/imposition of any remedies thereof. This may be necessary on competition grounds because, as the UK House of Lords Regulating in a Digital World Paper[5] notes:

"The need for regulation goes beyond online harms. The digital world has become dominated by a small number of very large companies. The companies enjoy a substantial advantage, operating with an unprecedented knowledge of users and other businesses. Without intervention the largest tech companies are likely to gain more control of technologies which disseminate media content, extract data from the home and individuals or make decisions affecting people's lives".

However, some OTTs would have to be subject to other emerging Online (Tech) Regulations... some have already begun asking for it

The encroached Internet value chain into the telecoms sector is upon us and brings along with it numerous other risks and/or harms that need to be "controlled" (i.e. regulated). The Internet existed in 2003, and yet there is no mention of it - not even just once - in the UK's Communication Act of 2003 which founded Ofcom. It was deliberately left out, or well kicked down the road. Well that road has ended. The Internet's positive and negative externalities are now firmly with us in the telecoms sector, and some of the negative ones must be controlled, i.e. regulated.

The founder of the World Wide Web has opined:

"The changes we've managed to bring have created a better and more connected world. But for all the good we've achieved, the web has evolved into an engine of inequity and division; swayed by powerful forces who use it for their own agendas."

Sir Tim Berners-Lee, Creator of the World Wide Web[6]

"Whilst the ITU's working definition of OTT is meaningful, BEREC's definition and sub-distinctions are incredibly more helpful (to regulators), clear and more precise"

"The Internet existed in 2003, and yet there is no mention of it – not even just once – in the UK's Communication Act of 2003 which founded Ofcom. It was deliberately left out, or well kicked down the road. Well that road has ended. The Internet's positive and negative externalities are now firmly with us in the telecoms sector, and some of the negative ones must be controlled, i.e. regulated".

REGULATING OVER THE TOP (OTT) SERVICES

However, some OTTs would have to be subject to other emerging Online (Tech) Regulations... some have already begun asking for it (continued)

Some of the categories of risks/harms include: online harms not tolerated offline (such as cyber bullying), cyber threats, Critical National Infrastructure (CNI) attacks, Disinformation, Fake news, Elections risks, Terrorism, Social Harms, Pornorgraphy, Dark Web vs. Open Web, Illegal vs. Harmful Content, Hate Speech, Privacy/Data Protection (c.f. Data Breaches), etc. This already long list of categories is not even exhaustive. Online/Tech regulation is now with us: indeed, some OTT players such as Facebook are already begging for it and has identified 4 clear areas in its view for immediate regulation: privacy, election rules, defining offensive boundaries and Data Portability7. Encroaching online/tech regulations are also very difficult and socio-cultural.

Other issues such as Online (the Internet's) free speech, generativity, collaboration/Creativity, socio-cultural norms - and balancing innovation vs. control, etc. And innovation vs. regulation must not be seen as binary issues either.

Conclusions

Regulating OTTs requires a clear acknowledgement and understanding of the encroached value chain into the Telecoms sector, and hence the need to rethink telecoms regulation in our new world of the IP-based Internet value chain. OTTs are just one symptom of such much needed rethinking. Rushing to regulate OTTs in several countries have resulted in clear negative consumer/citizen benefits. In addition, regulating OTTs should not deviate from the known primary purpose to regulate, and prior impact assessments are needed. Regulating also requires clearer and more precise definitions of OTT, and competition issues would need to be assessed starting from their relevant regulatory market definitions. However, some OTTs would have to be subject to other emerging Online (Tech) regulations, as many emerging harms need to be controlled or regulated. Lastly, regulators and Governments are well advised to "look before you leap" on OTTs.

Acknowledgements/Disclaimer

All opinions (except where explicitly stated) in this paper and errors are the responsibility of the author. Cenerva acknowledges (with thanks) collaboration with Research ICT Solutions Africa, and with Dr Christophe Stork in particular. The information in this Regulatory Briefing, which does not purport to be comprehensive, has not been independently verified. This Regulatory Briefing is for information and general reference only and does not purport to contain all the information that may be material to understanding OTTs fully. Any opinions expressed are our present opinions.

On the Author and about Cenerva (www.cenerva.com)

H Sama Nwana is Managing Partner of Cenerva Ltd, UK - a boutique training-led consultancy, concentrating on training and then advising Emerging Economies to redesign their TMT sectors. As a senior Executive Board Member, ex Managing Director (thrice), ex-Regulator (Ofcom Group Director 2008-2013) and Multiple awardwinning technologist and thought leader, he trains, mentors and advices/advised Corporates such as MTN, Facebook, Microsoft, VC firms, Governments and Regulators. Nwana has published a book entitled Telecommunications, Media & Technology (TMT) for Developing Economies: How TMT can Improve Developing Economies in Africa and Elsewhere for the 2020s 8. In May 2018, Cenerva Ltd, an international telecoms consultancy with clients in over 50 countries, acquired the Interconnect Communications (ICC) TRMC (Telecoms Regulatory Master Class) training assets from InterConnect Communications Ltd (a wholly subsidiary of Telcordia Technologies Inc.).

This acquisition further strengthened Cenerva's ability to provide world-class training for telecoms professionals in OECD, developing & emerging markets. Since its launch in 2000, TRMC courses have been attended by over 2,000 students from over 60 countries. TRMC courses help policymakers develop frameworks to make telecoms work in their local environment. They enable operators to engage with regulation in a way which promotes both economic and social benefit. Cenerva has expanded the TRMC programme with updated content and new courses to address key global challenges such as Universal Service Fund delivery, the regulation of OTT service, blockchains, Online Regulation, Cyber frauds, MVNOs, etc.

Prof. H Sama Nwana

Contact:
Email: **h.nwana@cenerva.com**
Tel: +44 (0) 203 286 5969

www.cenerva.com