

TSPs Business Model Strategies to Overcome OTT Challenges

Deepika Kaushal

Balaji Institute of Telecom & Management, Pune, 411045, India

Abstract— Over the last decades, the communications industry has seen massive changes in terms of customer growth, infrastructure deployment and especially the growth of mobile technology. Evolution of Data communication is expected to continue at an accelerated pace over the next decade with already visible impact on National Economy and particularly Telecom Operators. Operators have dominated the communications industry for more than two decades. Now they are challenged by new players: Over-The-Top services and social networks have skyrocketed. This study attempts to identify Future Business Aspects of OTT Video Market and the main OTT investment regimes in India. In addition to that, it also aids in providing alternatives to issues faced by Telecom Operators by OTT players.

Key words: VoIP, OTT, IoT, IP networks, Netflix, 5G

I. INTRODUCTION

Telecom service providers (TSPs) offering fixed and mobile telephony are currently being surrounded by online content, known as over-the-top (OTT) applications and services. The term over-the-top (OTT) refers to applications and services which are accessible over the internet and ride on operators' networks offering internet access services e.g. social networks, search engines, amateur video aggregation sites etc. The best known examples of OTT are Skype, Viber, What Sapp, Chat On, Snap chat, Instagram, Google Talk, Hike, Line, We Chat, e-commerce sites (Amazon, Flip kart etc.) Ola, Facebook messenger, Black Berry Messenger, online video games and movies (Netflix, Pandora). Users can directly access these applications online from any place, at any time, using a variety of internet connected Electronic devices. Moreover, digitalisation of content and services has increased choice, innovation and competition. In turn, it provides a crucial opportunity to realise a genuine Single Market for goods and services. OTT services primary applications lie in communications but use the Internet as the transport medium rather than the legacy Public Switched Telephone Network infrastructure. OTT services can take the forms of messaging, media, or voice services (also known as Voice over Internet Protocol or VoIP services).

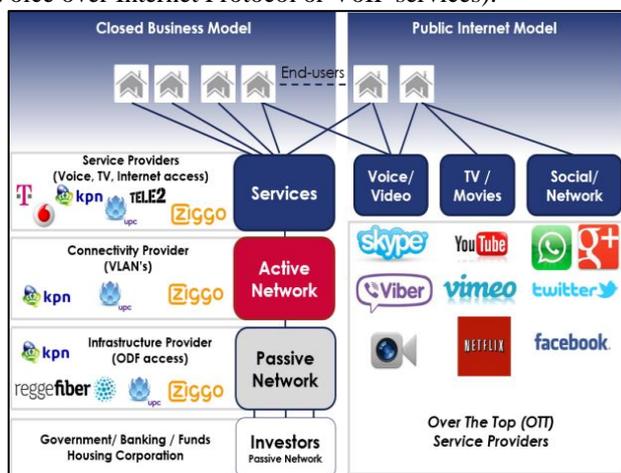


Fig. 1: Business Models

II. OBJECTIVES OF THE PAPER

The present paper seeks to study telecom on going trends in OTT in Indian context with reference to future business aspects of OTT Video Market and suggest measures to telecom providers on how to This study is specifically designed with the following objectives:

- To find out leading Future Business Aspects of OTT Video Market and the main OTT investment regimes in India.
- To find out how the network operators resist the challenge coming from the OTTs in terms of revenue and growth.

III. LITERATURE REVIEW

The worldwide density of messages sent using OTT IP services in 2013 has exceeded the volume sent using the traditional operator SMS service. In 2010, the OTT IP messaging volume was still negligible. The enormous growth of OTT IP messaging is expected to continue, while the combined volume of network operator provided messaging service is expected to stabilize traffic in future. In 2013[1], the international traffic volume carried by Skype, the best known OTT voice service, grew 36 per cent to 214 billion minutes. In that same year, the international telephone traffic (both fixed and mobile) carried by telecom operators grew from 7% to 547 billion minutes. Thus, international voice services also show a strong uptake of OTT services.

OTT services have also entered the audio-visual domain. Many reports shows viewers in the UK spend their 4 to 4.5 daily hours of watching time [2]. Overall, viewers still spend most time watching traditional live (linear) TV. Across all age categories, but more popular among younger viewers, OTT services are making inroads into the viewing behaviour. These services are offered by broadcasters (e.g., catch-up TV) and by on-line providers (e.g., Video-on-Demand by Netflix, clips by YouTube). In the US, similar shifts in viewing behaviour can be observed. Cable television viewing in the US was down 12.7% year-over-year in January according to Nomura Research, one of the biggest losses since Nomura began studying the market. "Its services like Netflix, Amazon Instant Video, and Hulu that are greedily grabbing viewers away from traditional TV.

OTT apps are usually utilised not by a single consumer, but by a social group. Annual global IP traffic has surpass the zettabyte threshold (1.4 zettabytes) by the end of 2017, driven by the diversification of pay-TV and video streaming services, and other media-rich content .The annual global mobile data traffic is expected to increase by 87.3% from 30 Exabyte's in 2014 to 292 Exabyte's by 2019[9]. More than 4 billion hours of videos are watched on YouTube each month, 30 billion pieces of content are shared on Facebook every month, and some 400 million tweets per day are sent by about 200 million monthly active users In India, Internet traffic is expected to grow more than 5 fold from

2013 to 2018, with a compounded annual growth rate (CAGR) of approximately 40 per cent.

IV. FUTURE BUSINESS ASPECTS OF OTT VIDEO MARKET & THE MAIN OTT INVESTMENT REGIMES IN INDIA

India is considered as a market for multiscreen video consumption, which has led to the emergence of numerous Over-the-Top (OTT) service providers in the past two years, including the entry of Netflix. The OTT video market in India is beginning to see real traction with more competitors and new innovative platforms on the back of cheaper data bundles. With 180.3 million active video viewers and around 4 million registered subscribers, the OTT video services market has earned over \$37 billion in 2017[9], according to Frost & Sullivan's report titled 'Over-the-top (OTT) Video Services Market, India, 2017–2022'.

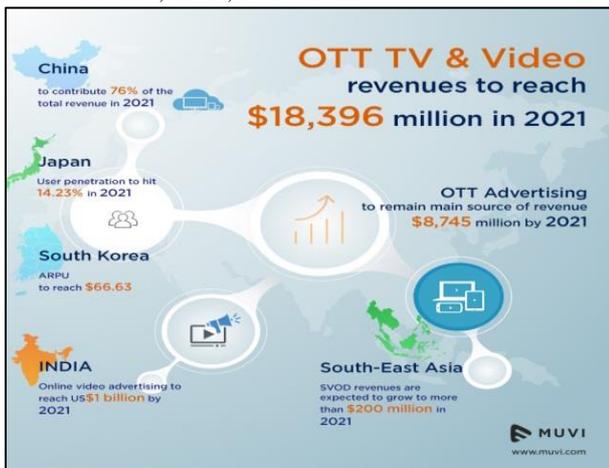


Fig. 2: Video Market Revenues

A. Prioritizing Customer Experience & User Interface

The customer experience and user interface need to be prioritized by telecom operators to stand a chance in this market. Exclusive, original programming and live content will give an edge to some platforms that can afford to offer such services. Telco's are using OTT video services extensively as a bundling strategy for attracting and retaining their consumers. It is apparent that industry is witnessing growing partnerships among telecom operators, handset makers and distributors and content aggregators.

B. Manufacturing Business

India is keen to invest in digital technologies but are struggling to derive tangible business benefits due to an imbalanced approach to digital investments, according to Reinventing Business with Industry, a report from Accenture [5]. About 93 per cent of the executives surveyed who represent 29 manufacturing and production companies in India with an annual turnover of at least \$1 billion, wants to leverage digital for growth. Also, 76 per cent intend to use digital to create new, experience-driven revenue opportunities. However, only 31 per cent plan to use digital to drive greater operational efficiencies, likely missing out on bottom-line improvements.

"There appears to be a singular focus on revenue growth, with businesses neglecting an important requirement of the digital era that is the transformation of operations to

unlock trapped value stated by Anindya Basu, geographic unit and country senior managing director Accenture in India[6]. "Businesses in India must place equal emphasis on using digital to drive efficiencies at the heart of the business and using the freed-up funds to drive strategic investments in new products, customer experiences and business models that create long-term value." For example, Accenture research has found that industrial equipment companies globally could reduce their total cost per employee by almost 20 per cent and increase their market capitalization by nearly 25 per cent if they combine innovative technologies such as autonomous robots, artificial intelligence, block chain, big data and 3D-printing.

C. Fertile Indian Market

Currently, India has probably one of the most liberal investment regimes amongst the emerging economies with a conducive foreign direct investment (FDI) environment. The Media and Entertainment (M&E) industry has significantly benefited from this liberal regime and most sectors of the M&E industry today allow foreign investment. For example, Balaji Telefilms Limited has raised INR 1.5 billion (\$ 22.09 million) through allotment of equity shares on preferential basis to catapult the launch and growth of ALT Digital Media, a Business-to-Consumer digital content business segment of Balaji Group. The M&E companies are taking the route of OTT with the changing multi-screen consumption pattern and demand for more choice of content. OTT is witnessing 35% growth year by year. Currently, there are about 30 OTT players in India and this isn't just impacting the media and entertainment industry, businesses of all types are capitalizing on OTT video.

The original content will be a key driver of Over the Top (OTT) growth and regional content library is expected to increase its share on OTT platform is predicted by Deloitte. It is predicted that the production houses may use the OTT route to release content like movies before their television premiers. Advertising revenue share from the digital platforms will increase as a fall out and there will be exponential pace of growth. There are some steady rulers in this sector like television and print but digital media is soaring like a dark horse and making it way ahead by changing the dynamics of this medium. Digital revolution is expected to generate new market growth opportunities, jobs and has become one of the largest business opportunities in the coming years.

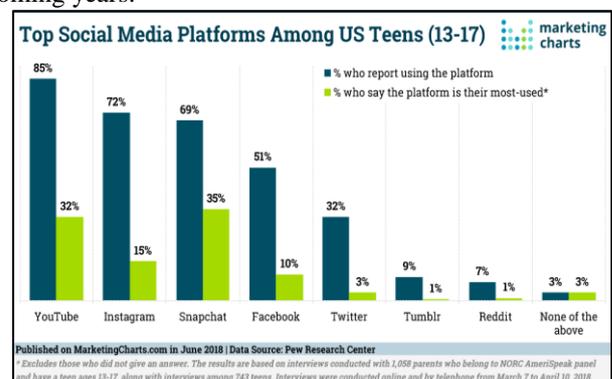


Fig. 3: Top Social Media Platforms

The government has taken the “Digital India Initiative” and as a part of this the plan is to connect the remote parts of the country. 8,621 villages are already boarded and there is a plan to onboard over 55,000 villages by 2019. Infact, about 112,871 km of optical fiber cable has already been laid under BharatNet for high connectivity. Bharat Sanchar Nigam (BSNL) has built over 2,500 free Wi-Fi hotspots across the country. Due to Demonetisation, Jan Dhan, Aadhaar, mobile penetration have changed digital payments landscape in India. Digital payments has also witnessed a massive growth with a shift in behaviour change as more people adopt digital payments in daily life.

V. TO FIND OUT HOW TELECOM OPERATORS FACE THE CHALLENGES COMING FROM THE OTTS

In a dynamic and turbulent time for communications, telecom operators must consider a new strategies, innovative solutions whilst still providing users with key services to build lasting revenue streams. If they invest and develop suitable solutions that simultaneously answer consumer demand and support technology innovation, they will broaden their customer’s demands and will open themselves up to new sources of revenue. However, if they fail, they will find themselves threatened by other new innovative players. In a competitive and dynamic industry let’s discuss what can be the new threats to telecom longevity?

A. Competition from OTT Services

The phenomenal growth of mobile messaging apps in the last few years has become a serious threat to telco revenue. About 2.5 billion people worldwide now use at least one messaging app, which is steering valuable traffic away from Telco’s text services. ARPU, which was around \$22 in 2005, has dropped by 81 per cent to \$4.14 as at April, 2018[4]. ARPU is a measure used primarily by consumer communications, digital media, and networking companies, defined as the total revenue divided by the number of subscribers.

B. Emergence of IoT

The integration of the IoT into our everyday lives is edging ever closer, and it is predicted that there will be 21 billion connected devices by 2020. To sustain these numbers, connectivity platforms will be needed. Therefore, pressure on Telco’s to develop a converged platform that is sufficiently functional to support the full weight of the IoT. The integration of technology companies with Telco services to form the IoT could also result in a hugely compressed Telco infrastructure.

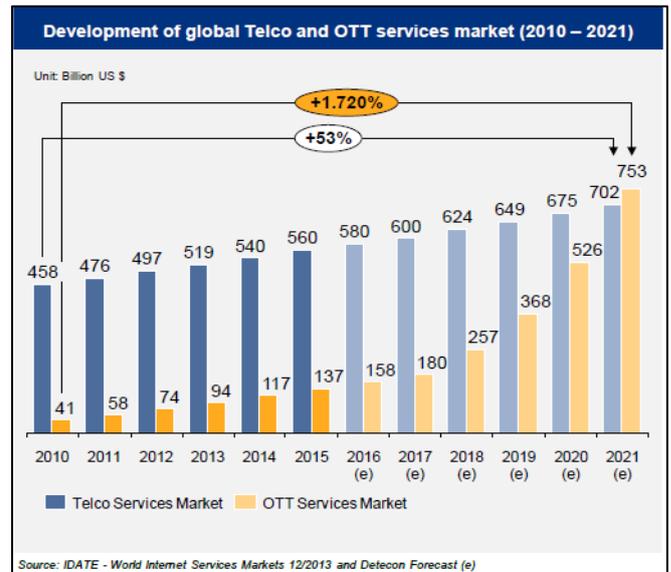


Fig. 4: Global Competitive Analysis

C. Voice Revenue

In 2013, voice revenue was the largest source of income for Telco’s, and so the decrease in voice revenue has led to an overall decline in ARPU. Internet messaging and VoIP is changing the way people communicate, where voice and text used to dominate the communications industry earlier. Smartphone traffic is moving to Wi-Fi, increasing from a total of 4.1 Exabyte’s of smartphone traffic in 2015 to 66Exabytes in 2022[2]. As a consequence, voice traffic has decreased from 50% in 2009 to 24% in 2017. Telco’s must find an additional source of revenue to replace voice and text such as network level Value Added Services.

D. Developing 5G

5G Will Not Be Just An Upgrade, But A Complete Revolution Of Mobile Technology. It Will Improve The Speed Of The Spectrum, Capacity And Latency As Well. It Will Also Provide A Browsing Experience For Users With Less Delay And Unlimited Connections. Moreover, It Facilitates The Development Of Iot. 5g Is Expected To Become Available To The Public By 2020. Vi. Value Creation Transition Strategies

VI. VALUE CREATION TRANSITION STRATEGIES

If telecom operators aspire to develop a successful strategic response to the rise of OTT competitors, they must first consider stock of the assets and capabilities they already possess, and determine how they can utilize them in order to compete against, the OTT players. Also, Telco’s can completely digitize their customer front ends including service, develop and deliver products that are completely software generated, and fully automate processes, such as billing and service coordination.

A. Infrastructure

Telecom operators excel at providing ubiquitous connectivity in both fixed and wireless networks, a capability that has cost them huge sums of money to develop and that no one else possesses and on-going upgrades to their next-generation networks will give them the ability to provide a variety of

advanced services. Operators are structured to focus on subscriber and revenue growth within a specific product or channel. Their inherent focus on short-term profitability, coupled with the conflicting priorities across the various business silos, makes it difficult to achieve consensus on a consistent strategy. This is in distinct contrast to how OTT players operate. Because they don't have to worry about maintaining and investing further in basic technology infrastructure, OTT companies can concentrate on quickly building out and bringing to market highly innovative products and services through rapid prototyping.

B. Transforming Business Models

Areas driving the highest costs, such as the network technologies, need to be reworked and moved into an IT-centric and more software-driven environment. It can reduce baseline costs by 30 to 70 per cent, improve time to market and agility, and enable flexibility[3]. The existing infrastructure needs to be transformed into a smart infrastructure (for example, converting traditional passive pipes into self-regulating active and smart pipes or changing streetlights into intelligent streetlights).

Machine-to-machine revenues are projected to grow by double digits over the next few years. Therefore, a network operator would serve as the backbone or platform of the complex data flow that links machine sensors to back-end services, such as analytics or cyber security and transportation supply-chain infrastructure to navigation, factory floors, social media, and logistics apps.

C. Collaboration in Connectivity

To build the scale required to offer certain services, operators will have to collaborate. Operators still need to compete when they go to market with new services. For example, progress has been made in laying the groundwork for the Internet of Things (IoT) by standardizing protocols and functionalities [8]. This is a must if operators want to build a healthy ecosystem for developers and so fend off the threat from those offering services on unlicensed spectrum. However, competitive landscape has changed, and operators need to shape their value creation strategies accordingly. Operators could build on existing customer relationships and trust to claim this space, and in so doing take both to a whole new level. Customers get a valuable service, and operators strengthen their hand with other service providers. After all, the hassle of registering is one of the main reasons for abandoning an app or a Web site. And here again it goes without saying that if operators collaborate, the service becomes much more compelling.

D. Advanced IP Communication Services

Operators can also consider differentiating themselves from the OTT companies by implementing new offerings for high-end segments, such as rich communication services, a combination of advanced IP-based voice, messaging, video and high-definition voice services. This is an essentially defensive strategy, yet every operator must pursue it in some form, even if it is unlikely to deliver meaningful long-term growth.

E. Advanced Security & Location-based Services

A customer authentication service could be a particularly strong asset for operators. This eliminates the need to remember all the different usernames and passwords or to undertake the security protocols required for the different applications we use. A single sign-in code gives access to all applications, be it banking, controlling the heating at home, or paying for a parking meter. It is a service offered by operators, who recognize and authenticate the user through the SIM card, but it's managed by customers themselves.

VII. BIG DATA & CUSTOMER ANALYTIC

Telecom operators possess large amounts of customer data not just demographic, but also usage, online behaviour and location. Operators could package anonymous versions of this data and sell it to businesses in retail, travel, and other consumer-facing industries. These businesses in turn could use the data to refine their customer understanding and improve their marketing efforts through behavioural targeting, personalized marketing, targeting location based ads, and other services. Operators could also use this data to offer single sign-on services to the retail customers enabling them to access services from OTT players from within the security of operator's ecosystem. Offering enabling services to companies in less complex industries such as entertainment and publishing will likely become a staple of most large operators' business models. It's in the more complex industries that operators have an opportunity to distinguish themselves.

VIII. CONCLUSION

TSPs have been using techniques such as blocking some sites or differential pricing of OTT apps. There have been other instances where the TSPs have co-opted the OTT players. Examples include Reliance Communications coming together with Facebook to provide free access to 38 websites including Facebook, Wikipedia, Reliance Astrology, Aaj Tak etc. Using techniques for effective data management and security authentication, TSPs can differentiate between various applications and provide customised services to Application Service Providers (ASPs). Nevertheless, whatever steps the TSPs adopt as strategies vis a vis OTT players should be reasonably within the limits of the law. There is a need for the Government to ensure proper regulatory balance to ensure a level playing field in terms of regulatory compliance.

REFERENCES

- [1] Over The Top. Wikipedia page. Available from: http://en.wikipedia.org/wiki/Over-the-top_content
- [2] Consumer OTT VoIP Outlook: 2013 to 2018 [2013] by Ovum. Available from: <http://fortune.com/2014/06/23/telecom-companies-count-386-billion-in-lost-revenue-to-skype-whatsapp-others/>
- [3] Smartphones and a 3G Network. 2010 May. Available from: http://networks.nokia.com/system/files/document/Signals_Research_Smartphones_and_a_3G_Network_May_2010.pdf

- [4] Telecom companies count \$386 billion in lost revenue to Skype, WhatsApp, others. Available from: <http://fortune.com/2014/06/23/telecom-companies-count-386-billion-in-lost-revenue-to-skype-whatsapp-others/>
- [5] Understanding The Dynamics of Over-The-Top (OTT) SERVICES CTO Research Study , OCTOBER 2016
- [6] Hunckler, M. (2015) Internet of Things: Opportunities for Apple, Startups, and More. Available via: <http://www.forbes.com/sites/matthunckler/2015/05/15/internet-of-thingsopportunities-for-apple-startups-and-more/>
- [7] JuniperResearch.MNOBusinessModels:Challenges,Opportunities&Strategies2014-2019
- [8] IndianJournalofScience&Technology:ImpactofOvertheTop(OTT)ServicesonTelecomServiceProviders,February2015
- [9] Regulatory Framework for Over-the-top (OTT) services by TRAI.
- [10] telecomstechnews.com/news/2017/jan/05/four-step-guide-telecom-operators-thrive-todays-competitive-ecosystem/
- [11] mckinsey.com/business-functions/digital-mckinsey/our-insights/how-telecom-companies-can-win-in-the-digital-revolution.
- [12] businessstandard.com/article/companies/regional-content-is-helping-ott-video-services-go-mass-says-report-118042900597_1

