Eroding Revenues of TSPs: An Exploration of Impact from OTT Applications over the Internet & the Need for Necessary Intervention Mechanisms

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Abstract:

Consumer usage patterns and demands drive the growth story of any industry. If the sector is unable to match the customer expectations, it may have to re-orient itself or else there would be some other players who may provide the services to the customers at a much lower price. The same can be attributed to the present situation of Telecom Industry in India. Indian Telecom Growth can be described in 2 phases, the 1st one being a connectivity phase where the objective was to connect as many people as possible to reduce the digital divide and improve tele-density. Once the industry was successful to register 900 Million subscribers, the challenge is to have success in the 2nd Phase of industry growth which is focussed on data and its applications to the end user. Voice revenues have been on a constant decrease due to reduced tariff structures and increased competition levels. The industry is also facing tough competition from Over-the-top (OTT) players who are using the telecom service provider's network and do not pay any charge/ subscription fees because the demand of such OTT applications is primarily end-user driven. This paper primarily discusses about the challenges which TSP face from OTT players in the market place and several intervention mechanisms that can be taken to enable the industry to have a successful growth in phase-2.

Telecom Evolution in India

Telecom Industry was not given prime importance in terms of reforms post independence, since most of the resources have been allocated for developing other necessary infrastructure. But during the early 1990s, Indian Government had to open up the sector for private entity participation as a part of the liberalization process to revive the economy and overcome the financial crisis. Till then the monopoly of the

government run organizations BSNL & MTNL were the only major operators to provide the basic telecom services. In the next few years, telecom policy NTP 1994 has opened up the sector for private participation where the licenses was given out for the basic telecom service. In 1992, the CMS licensing process was started using a 'Beauty Parade' method and the cellular services was started in 1995 creating duopoly market. From the beginning the telecom sector is a capital intensive industry where providing the last mile access to the subscriber involved huge cost and the companies had to treat the expenditure as sunk cost. It took several years to break even in the account books. High amount of license fee and spectrum charges left out only a couple of operators to full-fill their rollout obligations and the rest of the operators were unable to fulfil their obligations and one operator had to cancel their license. The entire process of liberalization and handing out the licenses was very political and unfair to the private operator in the beginning. But thanks to the NTP1999 which had eased out the situation for private operator where the revenue sharing mechanism was introduced to pay the license fee. In 2003, UASL (Universal Access Service License) has freed the operator from restriction related to use of technology in providing the telecom services and technology standard evolution has transformed the industry from pure voice based service to triple play services (Voice, Data & Video). The convergence of various platforms and technologies had enabled the mobile to become ubiquitous and dearest friend for mankind next only to personal relationships. 3G & 4G (BWA spectrum) auctioning process in 2010, has facilitated the industry to provide 3G services which provide more bandwidth speed and thereby allowing plethora of data & video services to be offered by the telecom operators.

Changing Ecosystem for Telecom Operators

The technology revolution & evolution has created a platform where the dwindling ARPUs (Average revenue Per User) from voice based service can be improved by the data revenues of the operators. SMS, MMS, caller tunes, ringtones and other value added services have improved/ sustained the ARPU levels from falling down. Most of the operator's financial performance was very much dependent on non-voice based revenues. The increased level of competition from duopoly in 1990s to more than 5-7 players per circle had left the operator little chance to ignore the potential of data services for their organizational development. The rapid changing ecosystem has also changed the landscape and companies had to relook at their strategies and perform SWOT analysis at much regular intervals. For the 1st time the technological factor has become so important than the political, economical and social factors and there is a need that companies have to deal with this at lightning pace.

Till 2001, the app ecosystem was mainly limited to the applications which have come pre-installed in the phone. The software was not open to any third party applications. The launch of Symbian OS which was majorly adopted by the mobile manufacturer Nokia and other players helped the developers to install third party applications developed on symbian platform onto to mobile. The need of further interactivity and user friendly apps has led to the development of apps store by Apple. The app ecosystem got the necessary push with the launch of apps store by Apple

which has redefined the way the customers perceive, use and maintain apps on their device. With the launch of Software Development Kit and Apps store transformation took place in value added service industry. Android operating system which is an open source further propelled the industry (both application developers and mobile manufacturers) to come out with smarter and cheap mobile phones which were more user friendly and high mobile computing power.

Such platform where the apps can be stored and the users can download them for free has enabled most of the smart phone users to make use of such facilities for their daily mobile operations. Voice and data services for which users were paying to the mobile operator for their usage identified that third party applications over the apps store fulfil their needs for free. Even though voice based apps were not that popular due to the service quality issues in India but further technology development may remove this limitation also. Today most of the apps which run on mobile phone making use of the telecom operator network (internet) where the revenue that is generated from the usage of apps is not shared with the telecom operator pose a real threat in future.

Over-the-top content Players and their impact for telecom industry
Developments in networks and technology have enable internet protocol to handle both data and voice packets with better service levels. IP telephony is a reality in most of the developed nations but it is not allowed still in India due to regulatory and operators objections. But the technology cannot be stopped from reaching the consumer and it has to be realised by the operators and the regulators. Hence several apps have started providing these services over internet in terms of over-the-top content and are bypassing the regulatory restrictions because content over internet is difficult for regulation.

Over-the-top content refer to the content that is delivered over the operator network through internet service provided by the operator where the operator has no control over the type of data and the content that is flown over their network. Hence the operator has no responsibility and doesn't claim the data due to lack of control over the data that is being transferred on their network. A fundamental characteristic of OTTs is that the Internet Service Provider (ISP) does not profit nor is involved in the distribution of the OTT applications, services and content (Ganuza, 2013). Presently most of the OTT content in India is for data & video services (messaging & MSS video). IP telephony services are not used very frequently by majority of the subscriber due to low broadband penetration levels in the country. But in future when the broadband penetration improves there might be real threat in terms of revenue loss for the operators on voice based services too. Over-the-top (OTT) voice and messaging players are the biggest threats for CSPs. They affect CSPs' core service revenue and margins by substituting traditional voice and SMS. Over-the-top players are currently the biggest threats for CSPs who affect core service revenue and profit margins. Telecoms need to prepare their strategy carefully to support business models that are sustainable, profitable and deliver a competitive advantage (Thunstrom, 2011).

This situation where the mobile operators spend huge amount of money in acquiring the license and spectrum charges where the payback period for break-even would be 6-7 years depending upon the rate of network rollout and development of services, the environment should be at least favourable for the operators to run their organization without much hassles. The impact of these OTT players will cost operators worldwide $23bn in SMS revenues in 2012, and that figure is expected to rise to $54bn in 2016(Ovum, 2012).

OTT players may impact telecom operators regular functioning in several ways as stated in the figure below. End users making use of OTT content services will have a major impact on their spending for data services provided by the mobile operator. The popular multimedia messaging application, "WhatsApp", was carrying 10 billion messages in mid-2012 & currently in 2014 the messages have reached to a whooping 60 billion worldwide. This results in less revenue generation for data services and lowers APRU leading to lower operating profit margins for the operator. This results in increased break even period for the license and spectrum charges paid by the operator. Lesser liquidity with the operator will lead to slower deployment of technology and network rollout. Because of the OTT data that is not in control of the operator various regulatory issues come into picture. Lower revenues from data services may force the operator to increase the tariff for core voice based services to counter balance the decreased VAS revenues and to maintain the ARPU levels.
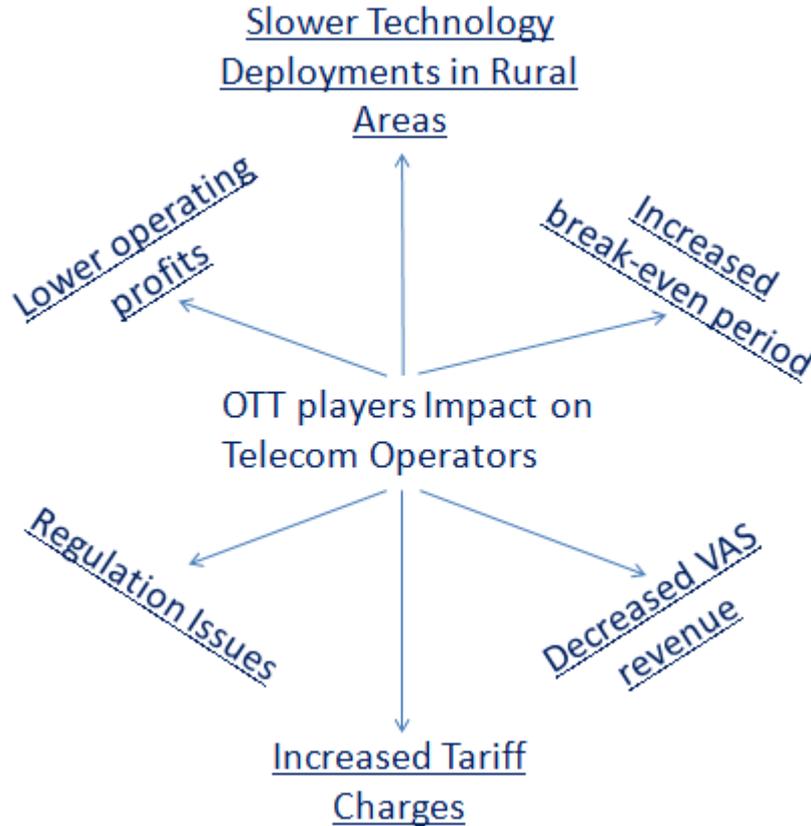

Fig: Implications of OTT players on Telecom Operators

Several types of OTT players exist in market place and all the payers can be classified under one of the following categories (Gartner, 2013) such as:-

- Ecosystem Players (Amazon, Alibaba, Apple, Google, Microsoft, Blackberry, Nokia etc)
- VoIP and Messaging Players (Skype, Line, WhatsApp, Viber, WeChat, Kakao Talk etc)
- Content Streaming Players (Youtube, Dailymotion, Netflix etc)
- Contextual Players (Facebook, Twitter etc.)

OTT mVoIP (Voice over Internet Protocol) could either be a disruptive threat or an innovative opportunity for market players along the value chain (Thunstrom, 2011). In Indian telecom sector there is a need for the regulator intervention for the second category of OTT players (VOIP & Messaging Players). Majority of the current situation call for measures to be taken for threats related to Messaging players on telecom operators. Let us have a look at how to mitigate the increased risk of revenue loss for the operators through various steps which will benefit both the parties (regulator and telecom operator) in a fair manner.

Addressing competition from OTT Players: Necessary intervention mechanisms
According to Gartner (2013), some of the strategies that telecom operators may use are:-

- The reactive strategy:- Adopting traffic management and optimization, throttling and Wi-Fi offloading. But these approaches will have a negative impact on the relationship with the consumer in long term. Indian telecom sector being highly competitive & MNP (mobile number portability) being implemented it may be advisable to follow this approach by the operator.
- The aggressive strategy:- This involves blocking off the content of select OTT players. This may not work in India at present unless the regulator allows such move. Moreover the use of Wi-Fi networks (mostly open) may still allow the messaging services which are out of the control of the internet service provided by the operator. Here the role of regulatory intervention plays a major part. Convincing the regulator for taking any such steps would be the difficult part on the operators.
- The opportunistic approach:- OTT content may be allowed only with higher data plans. Again such sort of service can be implemented only with the regulatory approval.
- The collaborative approach:- This approach is mainly on revenue sharing between the OTT player and the telecom operator which will have a win-win situation in future. This approach will be feasible when the OTT applications that consumers use are charging subscription fee from the consumers. In India, since the usage of OTT content is relatively new, presently majority of the applications are offered for free. Hence the operators may fail to convince the OTT players for any revenue sharing agreements. It is here that the regulatory intervention is necessary to mandate the agreements in a fair manner to all the stake-holders.

Conclusion

It is evident that OTT players will affect the data revenues of the telecom operators and the regulatory intervention plays a major role in maintaining the ecosystem that is favourable for both the telecom operators and OTT players. Hence TRAI is likely to come up with a discussion paper on OTT services where it will take the opinions from various stake holders and understand more about the present situation in market place. We see from the paper that collaborative approach will benefit the market place thereby creating justice to all the stakeholders in the long-term. We should also look at the other side of the story that OTT players might be enabling the users to subscribe for data services (2G & 3G) thereby helping the mobile operators with subscriptions. The further scope of the paper would be in understanding the advantages of the OTT content for mobile operators.

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