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)

Impact of internet applications in mobile networks' costs

1. Introduction

There has been a persistent debate for the past couple of decades about who should pay for the network costs associated to the booming internet traffic.

On one hand, telecom operators argue that they are investing significantly in infrastructure to cope with the increasing capacity required and their margins are shrinking, while large internet companies are reaping substantial benefits.

On the other hand, internet companies argue that customers are buying operators' services to be able to access to internet services. Therefore, without the internet services, the operators would not enjoy the current broadband demand.

To complicate more the things, the entire discussion about net neutrality appeared. Net neutrality discussion has implications on this topic, since it regulates the potential relation between operators and internet companies (e.g. operators charging for a preferential traffic management).

However, net neutrality topic is a rather complex one and it will not be discussed during this session.

On the contrary, during this session we will focus on the mobile network costs associated to internet traffic in order to provide sensitivity about the order of magnitude of the issue. Please note that this session does not intend to provide a thorough analysis of each country's situation but rather a high-level view.

2. Overview of internet traffic

Internet traffic mostly is driven by few application categories. According to Ericsson Mobility Report (June 2019), it is expected that, by 2024, 82% of internet mobile traffic will be associated to just two application categories: video and social networking (74% and 8%, respectively).

Moreover, the traffic is concentrated just in few specific applications. According to Sandvine's Mobile Phenomena Report (February 2019), the three video applications with more traffic (Youtube, Facebook Videos and Netflix) are currently representing 42% of the global mobile traffic. In the case of social networking, main apps (Facebook, Snapchat and Instagram) are associated to 22% of traffic.

3. Assessment of the mobile network costs

We estimate that the costs associated to mobile networks due to internet traffic amount around 28€ per year and subscriber. This estimation represents a generic hypothetical operator based on the cost model developed by Axon Consulting for the European Commission[1]. It should be noted that this value may vary from one operator to another depending on several factors such as size, coverage levels, traffic density, technology mix, country specificities, etc.

In terms of application category, 21€ would be associated to video traffic, 2€ to social networking and 5€ to software updates, audio, browsing, etc.

In absolute terms, these numbers mean that mobile operators expenditure associated to internet traffic potentially amounts to billions of euros yearly.

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[1] All the analysis are based on the public version of the model, available in EC's webpage: https://ec.europa.eu/digital-single-market/en/news/finalisation-mobile-cost-model-roaming-and-delegated-act-single-eu-wide-mobile-voice-call

No confidential information has been used for this analysis.

4. Final considerations

But, who should pay for this?

There is no obvious response. Traditionally, and most commonly nowadays, these costs are recovered from subscribers' payments. Basically, when you pay for a broadband connection, part of the invoice relates to internet traffic.

The problem may be in some cases in which the retail prices required to pay for internet traffic are not affordable for a relevant amount of the population, or if the subscribers do not see the value associated to such connection.

These cases may be tacked by governments, but we are seeing an increasing number of collaborations between telecom operators and internet companies. For instance:

- Telxius deployed a submarine cable between USA and EU (Marea) in collaboration with Microsoft, Facebook and, later, Amazon[2].
- Telefónica Perú launched the initiative "Internet for Everyone" in collaboration with Facebook, Corporación Andina de Fomento (CAF) and International Development Bank (IDB) Invest to connect several rural areas[3].

I guess that we will hear more examples of these collaborations during following sessions.

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[2] https://telxius.com/en/mareabrusa/

[3] https://www.telefonica.com.pe/es/internet-para-todos