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DAF/COMP/LACF(2016)8

Organisation de Coopération et de Développement Économiques
Organisation for Economic Co-operation and Development

16-Mar-2016

English - Or. English

**DIRECTORATE FOR FINANCIAL AND ENTERPRISE AFFAIRS
COMPETITION COMMITTEE**

LATIN AMERICAN AND CARIBBEAN COMPETITION FORUM

**Session I: Disruptive innovation in Latin America and the Caribbean:
Competition enforcement challenges and advocacy opportunities**

-- Contribution from Costa Rica --

12-13 April 2016, Mexico City, Mexico

The attached document from Costa Rica (SUTEL) is circulated to the Latin American and Caribbean Competition Forum FOR DISCUSSION under Session I at its forthcoming meeting to be held on 12-13 April 2016 in Mexico.

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JT03392077

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LATIN AMERICAN AND CARIBBEAN COMPETITION FORUM



**14th Latin American and Caribbean Competition Forum
12-13 APRIL 2016, Mexico City, Mexico**

Session I: Disruptive innovation in Latin America and the Caribbean: Competition enforcement challenges and advocacy opportunities

DISRUPTIVE INNOVATIONS IN TELECOMMUNICATIONS: THE CASE OF COSTA RICA

-- CONTRIBUTION FROM COSTA RICA (SUTEL)* --

1. Background

1. The concept of disruptive innovation is not really new. Although picked up and popularized by Harvard Professor Clayton Christensen in his book “The Innovator’s Dilemma,” the concept appears in prior writings of economist Joseph Schumpeter, who not only held that innovation was at the heart of economic progress but also that “creative destruction” is what allows new enterprises to displace established enterprises.

2. Disruptive innovations are innovations that take place in a market and change the whole competitive dynamics in that market, altering the terms of supply and demand. This type of innovation usually arises from a competitive strategy that seeks to challenge consolidated business strategies; that is, disruptive innovation comes to compete against technologies already established by dominant players in the market, which seek gradual consolidation in the market.

3. This type of innovation cannot just entirely transform an industry, causing such drastic market changes as resulting in the disappearance of products or services that were part of the market offering prior to the appearance of the disruptive innovation. It can also develop and evolve so quickly that in many cases traditional competitors are left without a chance to respond and it expands and consolidates at such a rapid pace that it erodes the market share of established providers, thus displacing the older competitors in the market.

* Contribution by the Superintendencia de Telecomunicaciones de Costa Rica (Telecommunications Superintendency of Costa Rica, SUTEL).

4. The telecommunications industry contains many examples of disruptive innovations, ranging from those related to the service terminal (cellular phone) to those related to the provision of the service as such. Concerning disruptive innovations that have affected the provision of telecommunications services, a series of Internet-based applications can be mentioned. In this contribution, the analysis will focus on the particular impact of two apps on the Costa Rican telecommunications market, Skype and WhatsApp.

2. Skype: A Shift in the International Telephony Market

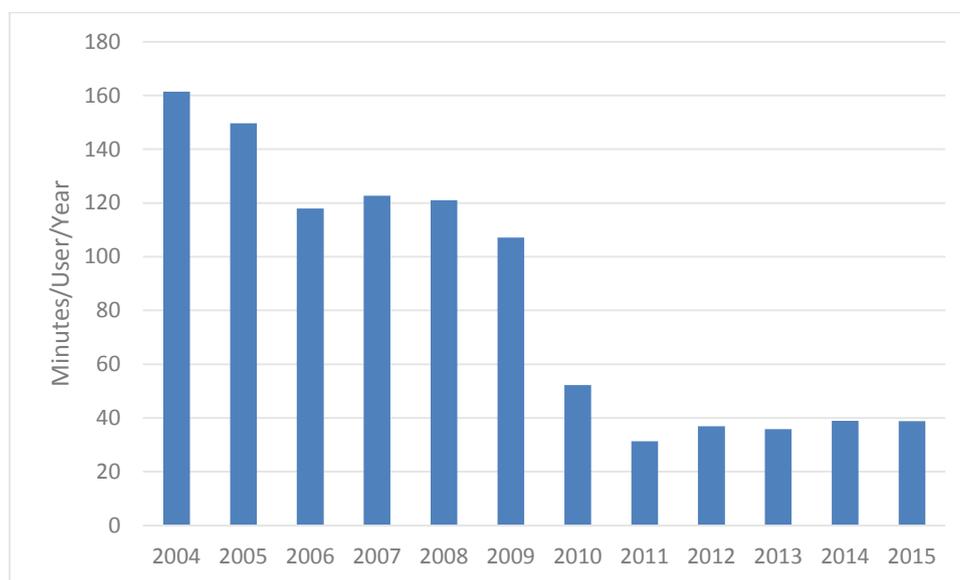
5. As software that enables text/voice/video communications over the Internet, Skype came into service in 2003 and transformed the international telephony market dynamics.

6. A major advantage of this service over traditional phone calls is that when the communication takes place between two or more Skype users connected to the Internet using any device (computer or mobile phone), it is free of charge. This has been very positive for users, since international telephony services have traditionally been provided by telecommunications operators at very high costs. For example in 2006 the cost of a telephone call from Costa Rica to the United States was USD 0.27 per minute, while in 2016 they are offered by telecommunications providers at around USD 0.14 per minute.

7. Skype later expanded its services, including calls to traditional fixed lines at a very low price, making this service even more appealing to users.

8. The introduction of this service, one of the most profitable for telecommunications operators at the time in the market, evidently led to a reduction in revenue. This continuous drop in demand for international telephone calls was also experienced in Costa Rica, as depicted in the following graph.

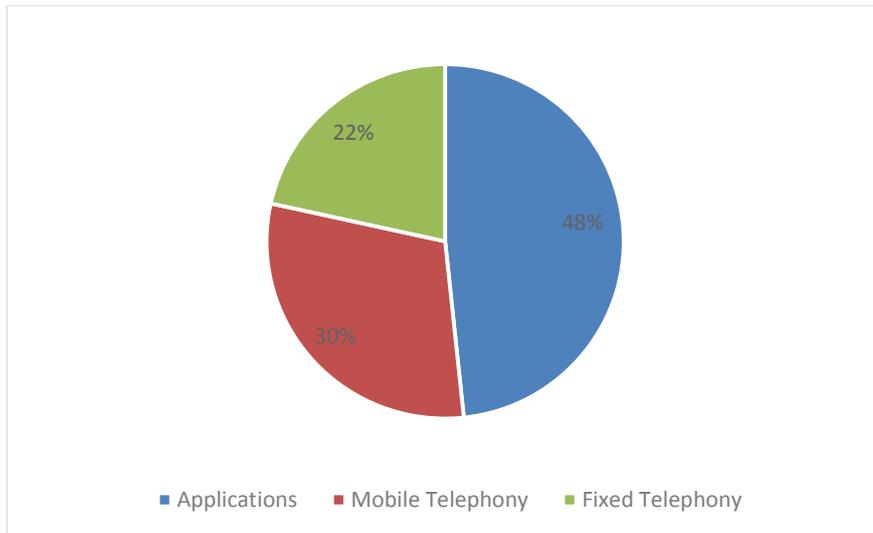
Graph 1. Consumption of international telephone calls in Costa Rica, in minutes per user per year, 2014-2015*



Source: SUTEL statistics.

9. Skype, along with other applications, have gained such importance in the international telephony service in Costa Rica that, according to a recent SUTEL survey, nearly 50% of the users of such service indicated they use an app (61% specifically using Skype) to make international telephone calls.

Graph 2. Costa Rica: Technological means used to make international phone calls, 2015

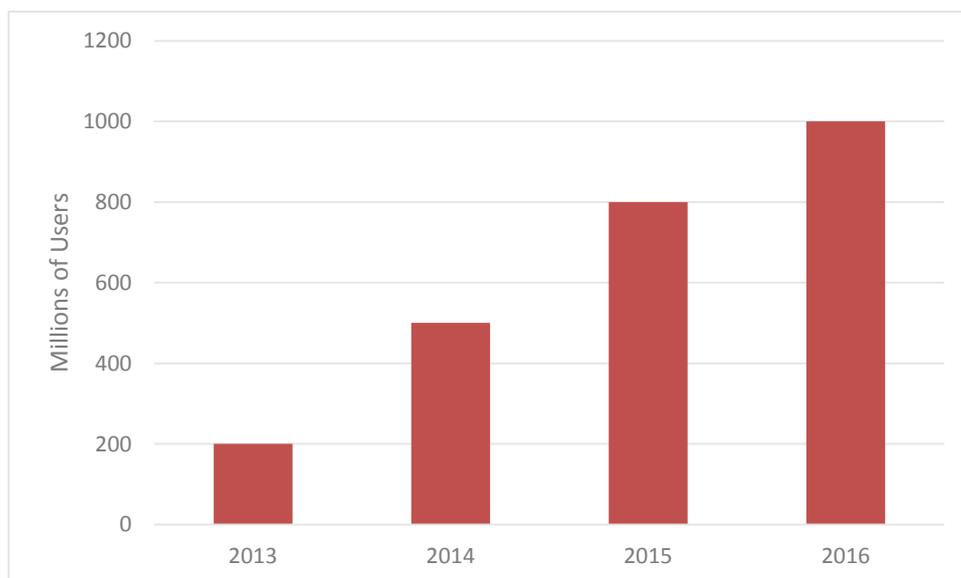


Source: SUTEL survey between the months of October and December 2015 regarding different telecommunications services.

3. WhatsApp: Redefining Message Services

10. WhatsApp is a message application that works for several mobile telephony operating systems. This service uses an Internet connection as platform, where it allows its users to send and receive messages to and from other WhatsApp users. This application was launched to the market in 2009 and has not ceased to grow ever since.

Graph 3. Number of active WhatsApp users worldwide, Figures in millions of users to April each year, 2013-2016*



*Data for 2016 are to February.

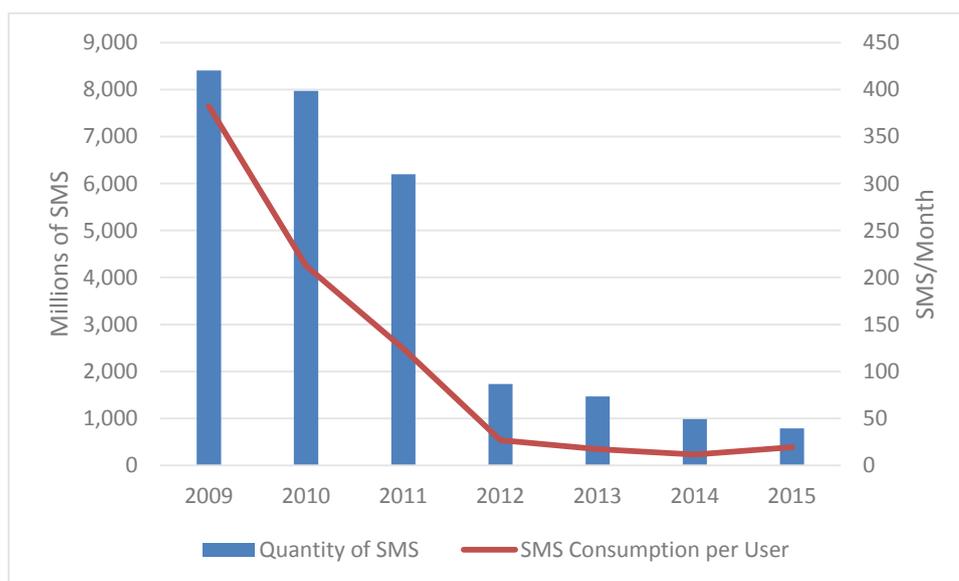
Source: Developed based on information consulted at: <http://www.statista.com/statistics/260819/number-of-monthly-active-whatsapp-users/>

11. Since the introduction of WhatsApp services into the market, not only has it been directly competing against short message services (SMS) but has also some to displace traditional service providers, i.e. telecommunications network operators. This displacement has occurred due to a series of factors. Firstly, the SMS is an older messaging system with a lesser degree of functionality because to its limited number of characters (between 140 and 160). On the other hand, WhatsApp is a global application and gives users the opportunity to send messages to other users located throughout the world at no additional cost. Moreover, this service includes functionalities not present in the SMS service. Besides using text messages, WhatsApp users can create groups, share images, videos and audio recordings.

12. Additionally, WhatsApp was introduced into the market as a service at no cost, thus changing the mobile operator business scheme, since the latter charges for each message sent. Although the WhatsApp service consumes data from an Internet connection, and one could argue that, therefore, it does represent a cost to the user, if the user has a flat rate mobile connection or is connected to a WIFI network, the service is effectively received free of charge.

13. These advantages have turned WhatsApp into a service with greater value added for users, displacing SMS services. The introduction of this service in Costa Rica resulted in a constant drop in SMS usage, to the point that the average Costa Rican user went from sending 382 messages per month in 2009 to only 19 messages per month in 2015.

Graph 4. SMS Consumption in Costa Rica, Figures in millions of SMS, 2009-2015



Source: SUTEL statistics.

4. Reaction of established operators

14. Evidently the substitution of traditional telecommunications services with over the top (OTT) services, as this type of application is known in the telecommunications industry, has resulted in a reduction in revenue for telecommunications operators. In this sense, in April 2015 Forbes magazine predicted that between 2012 and 2018 the entire telecommunications industry will have lost a total of USD 386 billion because of OTT services like WhatsApp and Skype.¹

15. This, in turn, has led telecoms to take a variety of actions, some positive, related with the attempt to develop their own services and thus compete directly against these new services through their own innovation.

16. However, other actions have not been as positive, to the point that operators in some countries have tried to block this type of service to avoid a greater loss of revenue. Decisions to block services such as Skype and WhatsApp have affected different countries, among them Morocco, Iran, Bangladesh, Equatorial Guinea, Egypt and Burundi.

17. Costa Rica has not been foreign to this situation. In 2005, for example, the Costa Rican Electric Institute (INSTITUTO COSTARRICENSE DE ELECTRICIDAD - ICE), former state-owned monopoly in the Costa Rican telecommunications market, requested to block Skype² in the country, claiming that, at the time, 1 out of every 5 calls to the United States were made through that app and, in its opinion, that could represent telecommunications fraud. Fortunately, the draft law promoted by ICE did not prosper at the time in the Legislative Assembly and the Skype service was not banned in Costa Rica.

18. The reasons given by operators, and even by the regulators, to allow blocking this type of application vary in nature. One argument frequently used by telecommunications network operators is that this type of OTT service lacks regulation, representing a regulatory imbalance that prevents them from competing under equal conditions.

19. The truth is that mobile telephony users worldwide have different instant messaging applications worldwide at hand to communicate, and this is their favourite. Therefore, with the appearance of this type of disruptive innovation the only way that telecommunications operators can compete is through their own innovation, which should take them to generate new value propositions for users.

5. Challenges to competition enforcement

20. The appearance of this type of innovation, in turn, has represented a major challenge for SUTEL in its role as competition authority. For example a complaint was filed against a telephone operator in 2011 regarding international telephone services, where the definition of the relevant market became a determining factor in the investigation. In this particular case, SUTEL leaned towards including app services that enabled international calls as part of the relevant market since, in its opinion, the analysis should include “*all means technologically available that allow a user to originate a call in Costa Rica and terminate in Nicaragua under similar quality and pricing conditions.*” That opinion effectively considered that apps such as Skype were creating greater competitive pressure on the international telephony market and, therefore, it was necessary to consider the effect of such applications on the competitive dynamics of that market, and, therefore, not only on the existence of an eventual position of domination by a local operator but also on the actions of telecommunications operators regarding that service.

¹ Source: http://www.forbes.com/sites/parmyolson/2015/04/07/facebooks-whatsapp-voice-calling/?utm_campaign=Forbes&utm_source=TWITTER&utm_medium=social&utm_channel=Technology&linkId=13374701#3a5dcff2785d

² For further details, please visit: http://www.nacion.com/ln_ee/2005/febrero/12/pais1.html.

21. Moreover, SUTEL is currently working on a case study where one of the strongest defences of the company under investigation has to do with the existence of OTT operators, like Skype, which come to constrain any market power that a local telecommunications operator could have.

22. These were some examples of how the existence itself of disruptive innovations like Skype and WhatsApp has come to affect not only the competitive dynamics of the telecommunications market but also the way in which the competition authorities must approach these cases. This is a significant challenge in the area of knowledge and monitoring that the competition authorities must face in a given market in order to address cases related to that market based on its true competitive reality.