

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

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Quality considerations in the zero-price economy – Note by Mexico

28 November 2018

This document reproduces a written contribution from Mexico submitted for item 2 of the joint meeting between the Competition Committee and the Committee on Consumer Policy on 28 November 2018.

More documentation related to this discussion can be found at:

www.oecd.org/daf/competition/quality-considerations-in-the-zero-price-economy.htm

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Mexico

COFECE

1. Introduction

1. *There is no free lunch*, the adage that plagues users of social networks and services that are priced at zero, especially those services found online. “Users may pay nothing, but companies like *Google* and *Facebook* have fixed costs to cover: engineers, data centres, etc. To make money, they squeeze their users indirectly, by charging companies to put appropriate advertisements in front of captive eyeballs. In the second quarter of 2017, Facebook eked an average of \$4.65 out of each of its users by peppering screens with ads and promoted posts. (By comparison, just eight cents came from payments and other fees, mainly from people paying for stuff within virtual games).¹

2. Mexico, 15th largest economy in the world,² has dynamic markets, innovators and a growing consumer base. The digital economy, well past its stages of emergence, is a breeding ground for anticompetitive practices. This paper will broach the challenges posed in the zero-price economy, ever present in the broadcasting sector, through radio and television, before and after pay tv, the white pages and now more recently applications or *apps* that connect users with product or services suppliers that seek user’s attention to advertisement, their information or future purchase at positive prices.

3. Mexico is rapidly developing technological firms that compete internationally. In the 2018 installment of the Consumer Electronics Show in Las Vegas, Nevada, Mexico participated with 20 companies, seventeen more than the previous year. *SAIOT (Internet of Things)* and *Asstel (connectivity and cloud computing)* are among the Mexican firms that participated.³

4. According to Matador Network, the top ten Mexican apps that are either free or connect service suppliers to customers include: *Laudrive* (a ride-hailing app that only hires women drivers for women customers), *Skylert* (a free application that keeps users informed of earthquakes, providing an alert before the earthquake and information during and after), *Metro & Bus México* (for 17 pesos, less than 1 dollar, this app may be used offline to maneuver the ins and outs of the public transportation system in Mexico City, Monterrey, Guadalajara, Estado de México, León, Villahermosa and Puebla), *Capptu*

¹ The Economist (2017). The ‘free’ economy comes at a cost. But economists struggle to work out how much. Available at: <https://goo.gl/4A9LwW>

² IMF <https://goo.gl/iQn47W>

³ Becerril, A. (2018, January 11). Las 20 compañías tecnológicas de México en el CES 2018. *El Economista*. <https://goo.gl/AJ2HuH>

(this platform allows photographers to sell their pictures, regardless of their expertise, line of business), *Visit Mexico* (this free application lists of places to visit, photographs, activities, restaurants and hotels are made available in this application), *Dollar in Mexico* (choose from diverse banks to convert currency, it provides a currency converter, and allows for the monitoring of the exchange rate), *Tevi* (an e-wallet), *Pozol ha* (a free Mexican video game that can be played offline), *Cine +* (a platform that concentrates the showtimes and rating for most movie theaters in a determined radius or nationally), *Yummie** (a free app that shows highly rated restaurants by users, pictures as well as the possibility of connecting with users), and *Auto Chilango* (a free that that allows users to check traffic fines, regulations, among other information).

5. Additionally, there are several ecommerce and online services that make use of platforms in the zero-price economy, such as *Google Shopping*, *Waze*, *Google Maps*, *Amazon*, *You Tube*, *WhatsApp*, *Facebook*, *LinkedIn*, *Spotify* and other music streaming platforms that require registration in exchange for use of the service without a monetary payment, there is a premium modality which provides the service without the hassle of advertisements.

6. The products and services listed above compete for user's attention, especially in the zero-price product market. How firms compete, and gain user's preference is a key in deciphering the mechanics behind competition in these markets.

7. This paper is organized in three sections: the interplay of quality in the zero-price economy, in which the role and measurement of quality are described, as well as the dimensions of quality. The subsequent part explores competition issues associated with quality in the zero-price economy in Mexico. The quality considerations in competition cases as well as data protection laws to zero – price products. The conclusions section gives way to what is to come for the Federal Economic Competition Commission, as this is an incipient matter that will likely result in acquiring new tools or adapting tools to better assess zero-price markets, cooperation mechanisms among the Mexican data protection and consumer protection agencies.

2. The interplay of quality in the zero-price economy

2.1. The role and measurement of quality

8. Zero-price markets in the digital economy center on quality, as products and prices are differentiated by consumers and users in terms of the dimensions of quality offered. In finding the motivations behind offering a product or service at zero-price, the literature offered centers on data acquisition, advertising and developing a consumer base. It is the increase or decrease of quality in its diverse dimensions that affect consumer welfare.

9. Quality has been defined as the flow of service, or the level of value, that consumers derive from a product. It is multidimensional in nature, encompassing a wide variety of factors. Moreover, quality is a subjective concept, insofar as different consumers may perceive or value certain quality attribute to a differing extent. The conceptual distinction between vertical differentiation and horizontal differentiation of products provide a (somewhat inexact) means by which to distinguish objective,

universally valued quality attributes from subjective elements that reflect individual consumer perceptions.⁴ As such, quality dimensions of a product or service must be defined on a case by case basis, so as for the trade-off to be identified as well as an increase or decrease in the quality offered, market definition and market power. In the case of zero-priced products, multisided platforms must be considered, and therefore quality dimensions on each side of the platform must be defined, as well as the vertical and horizontal differentiations.⁵

10. The consumers capacity to distinguish improvements in quality or if quality has been diminished requires further coordinated efforts between the Mexican consumer protection agency and the Mexican data protection agency. It is clear that through coordinated efforts, a greater part of consumers will be able to create more informed decisions when it comes to the use of applications and their true cost, may the cost be personal attention to advertisement, the monetization of their data through the use of browsers or the exchange of a service in return for personal data. A coordinate effort with COFECE could improve efforts in advocacy for more competed and efficient markets, as a better-informed consumer side will generate competitive pressure to the extent that quality dimensions, such as privacy, switching costs and advertisements will become increasingly more competitive, increasing consumer welfare and generating a more efficient market.

11. As for the Commission, the task ahead lies in the assessment of quality in sustainable business models for zero-price products (they may imply tying strategies, two or multisided models and premium upgrade) or non-sustainable business models (which may imply recoupment strategies that may see the products offered at zero price temporarily or a new entrant incurs initial losses to gain enough traction to become competitive, there may also be companies that use this as a predatory-pricing strategy to drive rivals out of the market and recuperating losses at higher price levels).⁶ Of the three approaches to the assessment of quality: 1. Sector-specific experts in quality; 2. Qualitative approaches, and; 3. Quantitative approaches; the takeaway lies in the importance of a hybrid of the three and their application on a case by case basis, considering the ramifications quality assessment has according to the type of product or service being offered.

12. As the demand side and supply side must be considered in an integrated manner to understand if a conduct or unlawful merger has taken place, the sector-specific expert seems to have more to offer in terms of market definition. They could also come into play through a coordinated strategy between the data protection agency and the consumer protection agency in efforts that advocate more and better consumer decisions. Furthermore, the sector specific quality expert may also be key finding the grey areas in legislation that must be improved to generate better enforcement efforts, considering the

⁴ OECD Executive Summary (2013) Executive Summary for the Roundtable on the Role and Measurement of Quality in Competition Analysis. Competition Committee, OECD.

⁵ Vertical differentiation refers to those product characteristics that all consumers would agree are valuable and thus constitute quality attributes; horizontal differentiation refers to product characteristics that are considered desirable only by some and not all consumers. See OECD Executive Summary (2013)

⁶ Newman, J. (2015) *Antitrust in Zero-Price Markets: Foundations*, 164 U. PA. L. REV. 149. Available at: https://scholarship.law.upenn.edu/penn_law_review/vol164/iss1/4 (p.154-158)

ever-changing nature of the services offered in zero-price markets as well as how big data can be used.

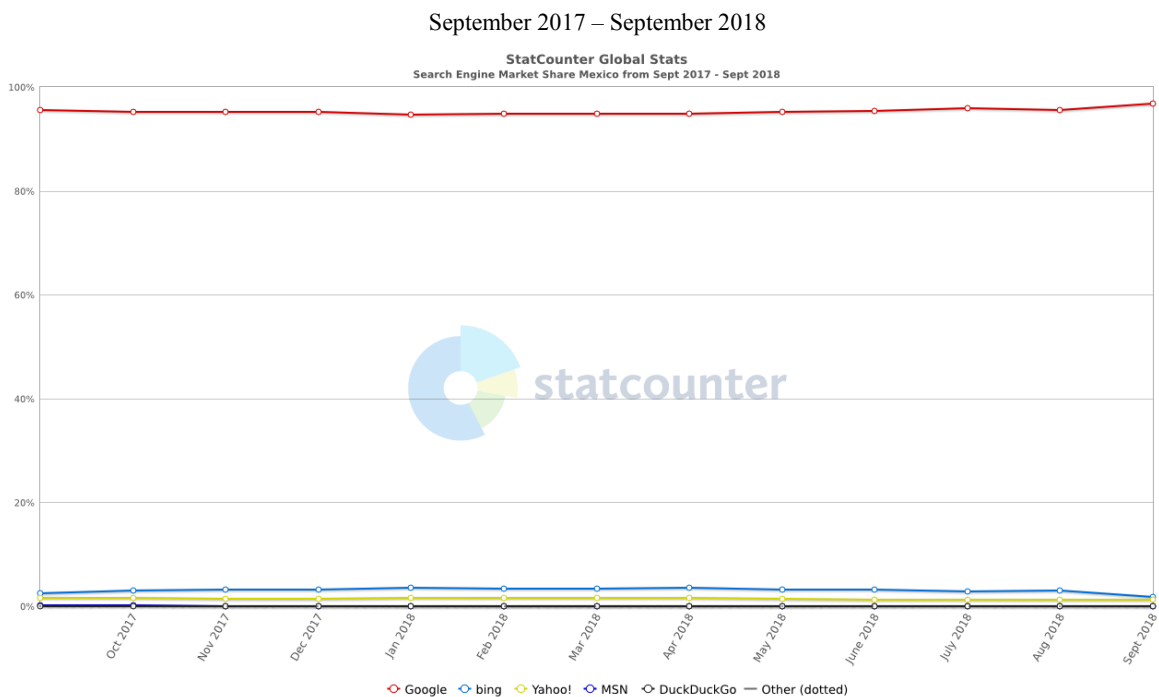
13. Among the qualitative approaches, COFECE has used surveys, questionnaires, interviews, market studies and preference analysis in more typical markets. The question that remains to be answered is in terms of Quantitative Analysis, when cases in the zero-price are brought before the Commission, will the SSNDQ (small but significant non-transitory decrease in quality) test that focuses on quality effects be useful in for the definition of markets?

2.2. Other dimensions of quality

14. The dimensions of quality in the zero-price economy as per the literature offered are privacy and security, advertising content, ease of switching and choice in complement markets as well as other dimensions such as innovation, speed, reliability, accuracy of search results, user friendliness, functionality and customizability.

15. Following the leitmotif of this paper, one of the most relevant quality dimensions is privacy. There are studies that show Mexicans are overall (around 70-75%) concerned with privacy issues, yet the translation into the use of applications or platforms that offer privacy are relatively low. For example, *Duck Duck Go*, the search engine founded in 2008 have very few users compared to *Chrome* users. The following chart compares the search engine market share in Mexico from September 2017 to September 2018, the search engines included are *Google*, *Bing*, *Yahoo!*, and *Duck Duck Go*.

Figure 1. Search Engine Market Share Mexico



Source: Stat Counter Global Counter, 2018

16. The data shows that *Google* is by far the most used search engine in Mexico, followed by *bing*, *Yahoo*, *MSN* and in last place, *Duck Duck Go*. Among the many inferences made from this information, it is clear that the need to protect data privacy and actions to do so through the use of a search engine that offers that possibility, do not match. The reasons behind this may be many, yet we can at least venture the question about access to information about privacy protection and awareness of choice.

17. As formerly mentioned, a consumer base that has more access to information, moreover information that will be readily understood in terms of the true effect, value and use of their data and what it means to make use of services in the zero-price economy will indeed increase COFECE's capacity to assess increases and/or decreases in diverse dimensions of quality, especially since these aspects necessarily are a subjective (especially in the case of horizontal differentiators) and must be identified by the consumers and not assumed by the Commission's experts.

3. Competition issues associated with quality in the zero-price economy in Mexico

3.1. Considering quality dimensions in competition cases

18. Defining quality is relevant not only to determine the relevant market, but also in the identification of anti-competitive harm. A reduction in quality would not necessarily mean a reduced use of data or exposure to advertisement in the case of zero-price products.

19. The very nature of these markets is one of opaqueness from the stance of the everyday consumer that is not well versed in the ins and outs of the digital economy. Most consumers not only play it by ear, but in many cases have less than perfect information on the exchange being made for the use of a service. That and the ever-changing nature that innovation brings to digital markets, technologies and the uses of data make it difficult for anyone who is not a full-time participant and/or developer to keep up. This implies a certain degree of uncertainty.

20. Among the issues that COFECE has before it are, in no specific order, a consumer base that requires more and better information on the ramifications of the data shared or terms of exchange when it comes to zero-price products, in order to determine relevant markets and therefore market power; the development of analytical tools suited to the high tech realities that that digital economy brings to markets in the form of applications and services which hold aspects that are not in the forefront of what is offered.

21. Considering the privacy dimension of quality, the need to collaborate closely on investigations, market investigations and studies, and even remedies with the Mexican Consumer Protection agency also becomes relevant. When enforcers weigh a small possibility of a reduction in competition, they are required to map a market's potential future when precedents or historical data are unlikely to aid its analysis. Therefore, tools must be flexible enough to provide the amplest possible picture.

22. COFECE's experience in the digital economy is nascent as the first probe into the market of e-commerce platform services in Mexico was opened on September 26, 2017

for the commission of possible relative monopolistic practices (unilateral exclusionary or predatory conduct), filed under IO-002-2017.⁷

23. As the investigation is ongoing, the firms of further details cannot be disclosed. From past experience in other markets, the flexibility needed to understand, define and assess markets that have diverse characteristics can be appreciated.

24. The 2006 case on bid rigging in the public sector (IMSS, Mexican Social Security Institute) found the former CFC (Federal Competition Commission) using an economic analysis to determine bid rigging from 2003 to 2006 in public procurement for insulin and saline solutions. A case that set precedent for the admissibility of economic evidence when establishing collusion.⁸

25. Furthermore, amendments to the Constitution in 2013 and the new Federal Economic Competition Law of 2014 has changed the enforcement landscape. García Santos Coy and Martín Padilla (2017) identified the impact of the regulatory changes from the perspective of practitioners, in the following categories: timing, information stage, criteria and analysis, remedies and new internal policies.

26. New legislation presents the opportunity for creating new legal precedents in competition. *As COFECE has started to exert its new powers, they have been subject to legal challenge. Judiciary decisions made by specialised courts clarify how the new law should be implemented. Competition policy is always a work in progress.* Alejandra Palacios, COFECE's chairwoman expresses what seems to be a testament to the Commission's capacity to innovate and capitalize on available resources in the most efficient way possible.

3.2. Data protection laws to zero-price products

27. In 2011, the Mexican legal framework on data protection was the first to consider data privacy in the cloud (in the 2011 Regulation), no other regulation made reference to this.⁹ According to article 16, section V, and article 36 of the Federal Law for the Protection of Personal Data Held by Private Parties the sale and commercialization of personal data without the express consent of the owner of said data, is illegal, as per the Privacy Notice which should contain a clause in which the data owner must indicate acceptance or denial of the transference of their data.

28. The authorities responsible for data protection in Mexico are: the National Institute of Transparency, Access to Information and Personal Data Protection (INAI as per its initials in Spanish, responsible for overseeing the law, conduct investigations, review and sanction data Controllers and authorize, oversee and revoke certifying entities) and the Ministry of Economy (responsible for informing and educating on the obligations regarding the protection of personal data between national and international corporations with commercial activities carried out on Mexican territory. It must also

⁷ Press release in English available at: <https://goo.gl/6SSFcv>

⁸ Case study on Bid Rigging in the Mexican Social Security Institute from 2003 – 2006 available in Spanish at: <https://goo.gl/8tbZAC>

⁹ PWC (2017) Ciberseguridad y privacidad: De la percepción a la realidad. *PricewaterhouseCoopers*. <https://goo.gl/KRT4K4> p. 18

issue relevant guidelines for the content and scope of the Privacy Notice in cooperation with INAI).

29. The legal framework for data protection is found in the Federal Law for the Protection of Personal Data Held by Private Parties, published in July 2010, and its Regulations, published in December 2011.

30. In January 2013, the Private Notice Rules, and the Binding Self-Regulation Parameters were published. These are in line with international best practices. **Their scope covers all collection and processing of personal information by a private entity.**¹⁰ The Guidelines for elaborating the Privacy Notice require individuals are informed as to any technology that allows the automatic collection of personal information simultaneously to the first contact with the individuals; requiring data owners to request the consent from individuals through an opt-in mechanism and informing individuals as to how to deactivate said technology, unless said technology is required for technical reasons. These restrictions do not distinguish between different types of cookies or similar technologies.¹¹

31. On January 26, 2017, the Mexican government enacted the General Law for Data Protection of Personal Data in Possession of Obligated Subjects. Mexico's government has made important strives to keep the legal framework relevant and responsive to the changes and challenges data privacy holds.

Table 1. Mexico's Legal Framework on Data Protection

Type of Law/Instrument	Name of Law/Instrument	Date of Publication in Federal Official Gazette
Law	Federal Law for the Protection of Personal Data Held by Private Parties	July 5 th , 2010
Law	Decree by which the General Law for Data Protection of Personal Data in Possession of Obligated Subjects is Enacted	January 26 th , 2017
Law	General Law for Data Protection of Personal Data in Possession of Obligated Subjects	January 26 th , 2017
Agreements and Guidelines	General Guidelines for the Protection of Personal Data for the Public Sector	January 26 th , 2018

Source: Data available on National Institute for Access to Information website¹².

32. As the scope of this legal framework covers all transactions, there are no sector specific or product specific laws to cover zero-pricing. Furthermore, when considering quality considerations in zero-pricing, there is yet to be a legal instrument to determine the quantification in terms of monetary resources that data has, in order to determine

¹⁰ Newman (2015, p. 166) states that in zero-price markets, customer information can serve multiple purposes: inform procompetitive behavior; enable anticompetitive exclusionary practices; source indirect network externalities which could favor the dominant firm. Data as a commodity or input in production chain, among others.

¹¹ Alcocer, G., Díaz, A. (2018) Data Protection 2018. *ICLG*. <https://goo.gl/eTG1Rm>

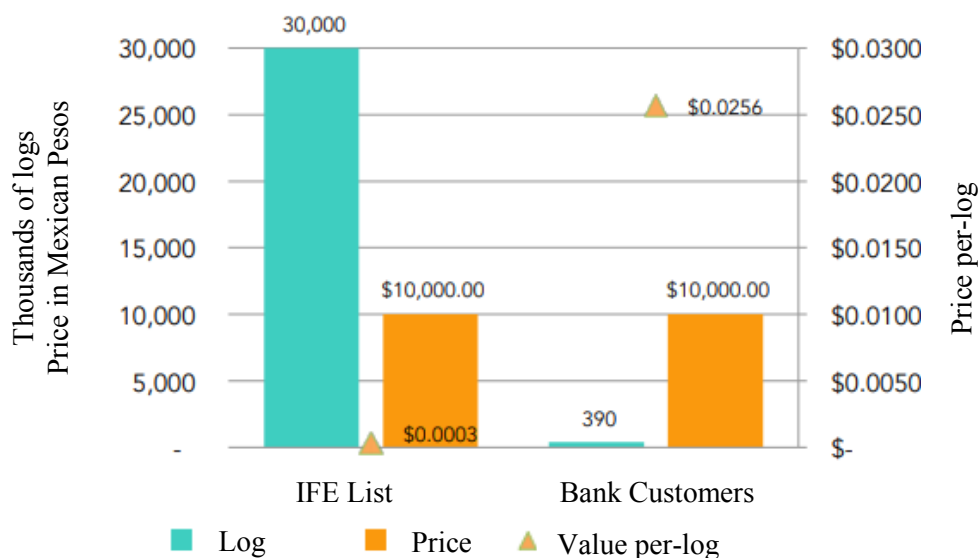
¹² For a complete historic list see INAI (2018) *Marco Normativo*. INAI. Available at: <https://goo.gl/UFGxbC>

whether the data being provided is in consonance with the quality of the service or product being provided at zero-price, considering that a decrease or increase in quality would constitute an anticompetitive harm, either to the consumer as they see their data devaluated or as competing firms being object of a margin squeeze, among other practices.

33. There are efforts to quantify the value of personal data in Mexico. January 6, 2012 marked the day the Federal Institute for Access to Information and Data Protection (IFAI as per its initials in Spanish), which has been replaced by the National Institute for Information Transparency, Access to Information and Protection of Personal Data (INAI as per its initials in Spanish) began receiving complaints on matters of the protection of personal data in terms of its access, rectify and oppose the processing.¹³ As such, the following information is available as to the going rate of data on the black market. This is an issue that affects public and private institutions alike.

34. The AMIPCI (2016, *Asociación de Internet* or Internet Association) studied economic value of data in Mexico.¹⁴ The following graph shows the approximate price of personal data in illegal markets in Mexico.

Figure 2. Estimated sales price of personal data in illegal markets in Mexico



Source: Asociación de Internet.mx, 2016, p. 44.

35. According to Asociación de Internet.mx (216, p. 44) among the data bases have been commercialized in Mexico, without the express consent of the holder of the data are the lists from the National Electoral Institute (former Federal Electoral Institute, IFE as per its initials in Spanish), including names, addresses, date of birth, occupation and electoral code or number, the Federal Police Registrations and Mexican Social Security

¹³ Animal Político (2012, January 6). Ya se puede denunciar violaciones a la ley de datos. *Animal Político*. Available at: <https://goo.gl/t2UgsA>

¹⁴ AMIPCI (2016). *Estudio sobre el valor económico de los datos personales*. AMIPCI. Available at: <https://goo.gl/1zwRpX>

number. In the financial sector, data bases on the banking customers by segment, account number, name, address, home and work telephone number, occupation and place of work have also been sold.

36. The problem with this type of calculation is that it is limited to the price on the black market is initially, the information may be incomplete, but more importantly, the potential of what can and is done with this data is not factored in. The Asociación de Internet.mx (2016) presents a series of methodologies used to determine the value of data, from different perspectives.

37. As all collection and processing of data is covered by the law, the question as to whether a sector specific law and even governmental body emerges. Considering the uses of big data, the difficulties faced by individuals, be it as a matter of information, understanding the value of their data and dealing with data that has been sold without their consent present challenges that zero-price markets make evident. According to the INAI's study on transparency, access to information and data protection, Mexicans are aware of a data issue, almost homogeneously throughout different socioeconomic groups and regions, it also reveals that when confronted with the misuse of their data, 91% did nothing and only 3% went before the authorities.¹⁵

3.3. Application of competition law to zero-price products

38. In Mexico, competition to zero-price products is still in an incipient stage, as it is a relatively unexplored area for the Federal Economic Competition Commission. The Federal Institute for Telecommunications has more experience, as broadcasting via television and radio have the characteristic of multisided platforms, where a viewer or listener of public television or radio implies they are on the receiving end of different types and formats of communications in exchange for listening to or watching certain types of advertisements. These are not necessarily market signals as intuition has led traditional market assessments to discard any consumer harm in zero-price products. The exchange may not be attention paid to advertisement, it may be an exchange of information, whose value may be unknown or underestimated by users. On the other side of a zero-price service we may find firms that are making use of consumer data. The monetization of data becomes relevant in these markets.

39. Enforcement strategies must consider the balance between either remedying competition in markets with zero-price products and preemptively ensuring efficiency without stifling innovation, which is a backbone in markets.

3.4. Challenges associated to law enforcement

40. Antitrust law in zero-price markets are faced with the task of ensuring efficient markets in the face of individual and private interests. These markets particularly present challenges that involve several areas of enforcement that cannot be met by a single agency. Data protection, consumer protection and antitrust enforcement and competition advocacy run the risk of duplicating or triplicating efforts, generating hindering outcomes to the detriment of innovation, efficient markets and ultimately, consumers.

¹⁵ http://inicio.inai.org.mx/Estudios/inai_parametro_final.pdf

41. The objective of antitrust law is to ensure buyers receive the best possible products while minimizing the attention and information costs buyers must exchange for those products. Antitrust laws must protect the competitive process, which could entail identifying data as a barrier to entry on one side of the equation, as well as identifying decreases in quality that would lead users to provide information or attention to advertisement in the same or increased levels. There are lessons to be learned in privacy protection that can help in the understanding of the use and abuse of data to the detriment of market efficiency.

42. According to PWC (2017) 87% of Mexican companies have recognized having a security incident (pertaining to cybersecurity and privacy). Mexico has technical strength in terms of cybersecurity and privacy protection, the weaknesses are organic, that is, there are institutions that have a technical framework and equipment against cyber incidents, but they do not have the planning and organic structures that promote the implementation of measures of this type of security among different sectors and institutions. Mexico is ranked at a low level regarding legal and institutional framework in charge of online security, as well as training programs, certification, professional development and public certifications on the matter. Which indicates low levels of cooperation at a national and international level, and cooperation networks for information dissemination.¹⁶

43. The problems Mexican policy makers face when it comes to data, according to PWC (2017), in terms of competition and otherwise, is not a technical nor legal issue, but understanding why data is used and what it is used for (purposes, processing and transfers). [...] Oversight is another issue as most companies do not communicate when they have been attacked, how they came to realize they were under attack and what their response was.

44. This along with the understanding of how data is used by a zero-price firm is fundamental in order to understand diverse aspects of quality in the zero-price economy and the data trade-off.

45. When users of an app, service or product at a zero-price enter into agreement, knowingly or not of the data that is being exchanged, the users enter into risk, as the personal data may or may not be at risk in case the firm/platform is hacked. On the other hand, the legitimate use the data may receive also remains to be understood, as it could be used to tailor make a service or product to better target each user, thus personalized pricing becomes an issue.

46. The use of algorithms also comes into play, as this data may be used to better interact with the other side of the platform, in the case of applications that offer a service at zero -price which is paid for through advertising. Thus, the use of algorithms that improve marketing strategies, taking prey of certain more vulnerable consumers, as there are studies that show the use of these types of strategies targeting people with certain conditions such as depression and addictions, which raises an ethical question in the arenas of consumer protection and information disclosure regarding what the data being handed over will allow the firm to do. On the other hand, firms are not required to disclose what they use revenues on. In the same manner, the argument could be posed that if the use of data is legal, the why and how the data is used, becomes irrelevant.

¹⁶ PWC (2017) *Ciberseguridad y privacidad: De la percepción a la realidad*. PricewaterhouseCoopers. <https://goo.gl/KRT4K4>

47. In terms of quality, the consideration for competition becomes evident that what can and will be done with the data is relevant, as it can be translated into monetary terms. For instance, targeted advertisement would result in greater revenues for the firm contracting services with the platform granting a zero-price service. This service becomes a premium service, thus the data being processed or sold has a price. Therefore, data becomes a commodity of much higher price and demand than the service being rendered on the platform. One would wonder if the platform does not end up owing users, as the effects may be exponentially beneficial for the other side of the platform.

48. For COFECE, this is an area that has yet to be explored as the tools and human resources are developing. There are two cases currently under review, involving electronic commerce and platforms. As they have not been concluded, information has not been made public. The Commission has a long track record when it comes to international cooperation with the purpose of capacity building, COFECE has been on both ends, thus participating in a virtuous cycle of training that, among other effects, leads to improved communication, especially if cooperation on international antitrust cases is required.

49. Regarding inter-agency cooperation within Mexico, COFECE, the Mexican consumer protection authority and data protection authority, inroads have been made. For instance, The Federal Consumer Protection Agency (PROFECO) and COFECE have an agreement¹⁷ signed on May 19, 2014, in which the agencies have agreed to facilitate the sharing of information, generate mechanisms and a base for the joint enforcement of competition and consumer protection legislation, for example, a standing meeting twice a year. However, in practice, and for the purposes elucidated in this paper, this is a starting point that needs to be strengthened and made more robust. For instance, users operate with imperfect information when it comes to selecting a service, being influenced by zero-prices may deter consumer from asking the right questions when it comes to what is really at stake, whether it is their attention to ads, the exchange of personal data or the permanence of the zero-price offering.

50. Understanding what consumers are facing with will improve COFECE's definition of quality. As for the National Institute of Transparency, Access to Information and Personal Data Protection (INAI as per its initials in Spanish), the outset is an agreement to facilitate cooperation, which could translate into a tripartite joint enforcement in zero-price product cases.

4. Conclusions

51. Competition enforcement is not discovering zero-price products but creating addendums to the paradigms that recognized monetary transactions which now must incorporate and assess costs to users such as time, attention paid, and personal data.

52. Zero-price products bring competition authorities closer to consumer welfare as determining harm requires a case by case assessment of quality to properly define markets, market power and anticompetitive conducts.

¹⁷ See the implementation annex signed by COFECE and PROFECO on January 29, 2015. Available at: <https://goo.gl/QVuH4A>

53. Mexico's economy is inserting itself into the digital economy, as it grows in users as well as application developers, which presents challenges as consumers become acquainted with technologies that will require a non-monetary transaction in their use. Companies do not profit from a traditional exchange of currency vis a vis a service or product, as the product or service developer may make use of multisided platforms, therefore competition includes diverse quality dimensions which, among other purposes, aim to attract and compete for consumers attention which will translate into the monetization via advertisements and attention paid, the exchange for consumer's data or the potential of charging for a once zero-price product.

54. Quality, being a subjective concept requires competition agencies to define the horizontal and vertical differentiation case by case to identify anticompetitive practices, which implies working closer with users. Mexico's competition authority does not directly address consumer protection issues. To avoid overlapping and duplicating work, which could ultimately hinder competition and consumer protection, COFECE is looking to increase collaborative efforts with PROFECO, the Mexican consumer protection agency. This collaboration could also result in improved competition advocacy through the strengthening of competition culture in Mexico.

55. Of the approaches to the assessment of quality dimensions, 1. Sector-specific experts in quality; 2. Qualitative approaches, and; 3. Quantitative approaches; COFECE has made use of these in traditional markets. It stands to reason that the Commission is adapting the approaches to its current probe in e-commerce platforms which will pave the way to future investigations in the digital economy, specifically, the definition of quality dimensions of zero-price products.

56. The assessment of quality is key to understanding the exchange being made and therefore if the competition and free market process has been negatively affected. A concern that has grown in relevance in several jurisdictions is the use and abuse of personal data. For which the Commission could consider generating the possibility of collaborating with INAI, Mexico's data protection agency (the National Institute of Transparency, Access to Information and Personal Data Protection, responsible for overseeing the law, conduct investigations, review and sanction data Controllers and authorize, oversee and revoke certifying entities).

57. Although consumers in Mexico have reported to be worried and interested in protecting their personal data, the use of *apps* that require users to submit or even surrender control over their private information is an issue. This presents an opportunity for collaboration, not only to better understand what personal information is being exchanged and perhaps a dimension that could be valuable to COFECE to improve the privacy assessment of quality dimensions, but also to intensify a competition culture through a proactive consumer base that can better exert competitive pressure on firms that offer zero-price products.

58. Competition enforcement presents several challenges along the lines of the developing tools or the adaptation of tools for quality assessment, accurate mapping of the service or product, quality dimensions on the zero-price side of platform (if it is a multisided market), striking the balance between innovation and protecting competition and free market access. On matters of big data, the question as to data as a barrier to entry and if specific regulation is needed. Considering the multifaceted nature of zero-price products, overlapping efforts with the Mexican data protection and consumer protection agencies is a matter that deserves attention, as the duplication of efforts may result in

hindering objectives in each agency or to the contrary, over limiting the scope of action could lead to gaps in enforcement.

IFT

5. Introduction

59. In telecommunications and broadcasting, the zero price schemes are present in traditional and digital goods and services (product).¹⁸ In this contribution, the Federal Telecommunications Institute (IFT) presents its considerations about the use of zero pricing and the application of competition tools to analyze those practices under different platforms, environments and business models in telecommunications and broadcasting in Mexico. The fact that zero pricing has become more relevant due to the use of pricing by algorithms is highlighted.

60. This contribution also presents the reasons why the validity of competition law and tools prevails to identify, assess and deal with risks associated to those practices, or whether it is necessary to advocate for further regulation or regulatory improvement. In assessing competition effects of zero pricing, possible concerns and their possible solutions, the IFT identifies the value chain and the exchange of value between parties or sides. Under this approach, relevant quality considerations are those features or attributes that have an impact on the value involved in the exchange, even if they have no price, they are not monetized, or they can be observed but not quantified. However, methodological tools must evolve to address the relevant features of the transforming digital economy, pricing trends and quality dimension of competition in order to intervene, based on evidence, either by enforcement or advocacy, when necessary.

61. In this regard, the Federal Law of Economic Competition (LFCE) and judiciary criteria provide sound basis to define markets, market power and theory of harm for conducts and mergers that involve zero pricing in order to determine whether they are anticompetitive or they are not. They also provide for collaboration and advocacy to address competition concerns through regulation or policies (i.e. consumer protection).

6. Quality considerations

62. Quality of a service (QoS) derives from a product's performance. Users may judge it through their perceptions, thus user experience (QoE) or satisfaction is an after-effect of quality. In the case of differentiated products, quality may have several and different dimensions, and can evolve or change rapidly in innovative markets.

63. Therefore, quality features could be assessed through indirect indicators, not always quantifiable, and a sound rationale on the role that those features play in the competition process. For example, in free over-the-air broadcasting, final users constitute one side of a market that consumes content at zero price and, as audiences, exchange their time, that broadcasters can monetize on the other side of the market by selling advertising spaces.¹⁹ In these cases, the IFT has used measures of audience shares and, whenever data exists, the advertisement income and prices to estimate the broadcaster's market shares

¹⁸ Even though zero pricing involves goods and services, this document focuses on services due to its proliferation in the telecommunications and broadcasting sectors.

¹⁹ The IFT has consistently applied two-sided market analysis in this service.

and market power. However, the measurement and assessment of quality may be challenging, especially in innovative and dynamic markets.

64. Quality considerations on zero pricing can be grouped into two categories: those directly related to the product involved and those related to the business model. For example, in an audiovisual over-the-top (OTT), the first category may comprise technical quality (e.g. low latency and definition), content diversity, availability, uses in multiple and different devices, uses on/offline. In the corresponding business model, some relevant features may be the inclusion of advertising and subscribing conditions, i.e. the obligation of providing personal data, use of navigation trackers, registration of preferences, and portability of data or content outside the platform to another environment.²⁰

7. Quality and value considerations

65. On the supply side, the offer of a service at zero price aims at attracting more users and monetizing –directly or indirectly²¹– their value throughout:²²

1. Advertisement selling or sponsorship;
2. Trading or using information obtained from the user’s subscription and/or use;²³
3. Developing or strengthening loyalty and preserving user bases, especially in mature markets that face competition pressures from other services; or
4. Selling complementary services, improvements or upgrades from a *basic zero priced* version of the same service.

66. In this approach, it is worth considering that: (1) traditional services that use zero pricing (e.g. mobile or free broadcasting) commonly design local or nationwide offers, thus with less heterogeneous quality preferences or perceptions from users; and (2) digital services are prone to design multinational or worldwide applications, thus dealing with different values, preferences or perceptions attributed to quality.²⁴

67. On the demand side, users subscribed or using a zero priced service provide value enclosed in:

1. Time and willingness to be exposed to advertising or sponsored information.^{25, 26}

²⁰ In this aspect, there are portable apps and profiles versus non-portable (e.g. iTunes).

²¹ Examples of direct monetization are in numeral (iv), and examples of indirect ones are in (i) to (iii).

²² In this report, we are not considering facts that affect availability and performance of the physical layers or internet.

²³ For example, the development of Sharing Economy where there is an exchange of products and information.

²⁴ For example, privacy as a cultural related feature may not pose the same standard in all countries.

²⁵ Robert, C. Doraszelski, U. and M. Draganska (2009), *The Effect of Advertising on Brand Awareness and Perceived Quality: An Empirical Investigation Using Panel Data*. *Quantitative Marketing and Economics* 7(2), 207-236. Available at: <https://link.springer.com/article/10.1007/s11129-009-9066-z>.

2. Providing information, including personal data, at the subscription and during their use of the service;
 3. Pre-selection to restriction of possible elections among alternative providers of additional or complementary goods or services (e.g. walled gardens), and
 4. Payment for complementary services, improvements or upgrades from a *basic zero priced* version of the same service.
68. Considering those features or attributes, and their impact on the selection or adoption of the service, it is possible to identify the quality considerations relevant for the correspondent competition analysis and their wage (priority or importance).
69. Quality considerations to assess competition impacts may require having information on users' preferences. For example, their willingness to pay for full-service apps in comparison to limited-service on zero-rated plans, the variations of the product's adoption rate due to zero pricing, and the persistence of the impacts of zero pricing.

8. Business models

70. The business models referred into the Secretariat's background note illustrate the prevailing and increasing diversity and combinations (i.e. *hybrid models*), as well as the relevant quality differentiation dimensions to look at. As mentioned in that note, although a large number of models arise in online services, there are also illustrative cases in traditional offline services –such as mobile broadband and free-over-the air broadcasting. Additionally, it is foreseeable that more and different business models emerge with the increase in the adoption of algorithms for the determination of prices and personalized offers, as well as IoT, machine learning and other technological trends. Within this prospective, zero pricing may exhibit differentiated characteristics, complicating the analysis (static and dynamic) of its impacts in competition.

71. In general terms, identifying the business model that underlies the provision of zero-pricing and the value exchanges –approximated through quality considerations–serve as a reference to: (1) identify the elements of the practice that raise concerns; (2) define the relevant market and related ones; (3) determine the existence of an agent or agents with substantial market power; and (4) assess if there is a harm to competition and, thus construct and prove a sound theory of harm.²⁷ Competition assessment of zero pricing practices must be based on evidence, even those based on quality considerations, whether they are quantified or they are not.

²⁶ Investments in digital advertising is increasing. In Mexico, between 2015 and 2017 the total investment in advertising increased approximately 13% from 74.4 to 83.9 billion pesos. In the same period, advertising in digital media grew 70%, while spending on traditional media (TV, radio, paper, etc.) remained practically constant. Source: IAB México (2018), *Estudio de Inversión en Comunicación en Internet 2018*. Available in Spanish at: <https://www.iabmexico.com/estudios/inversion-comunicacion-internet-pauta-2018/>

²⁷ Evans, D. (2011), *The Antitrust Economics of Free*, John M. Olin Law & Economics Working Paper, University of Chicago, No. 555. Available at: https://chicagounbound.uchicago.edu/cgi/viewcontent.cgi?article=1483&context=law_and_economics.

72. In Mexico, the use of zero pricing/rating (i.e. that a user's data consumption in certain application or apps within a walled garden or platform is not counted towards their data allowance or cap) has been highlighted in the net neutrality internal assessment conducted by the IFT.²⁸

73. For example, mobile carriers have been rolling out zero priced products allowing users access to certain Internet traffic (e.g. popular apps, their own or affiliated ones) without counting it against their monthly data plan. When ISP or carriers offer zero pricing/rating access to applications or services in excess of the usage plan subscribed by the user (i.e. once that data has been consumed), they would be discriminating in favor of those products without the user being able to choose freely and competition concerns may rise.

74. Available information obtained from users' surveys report that in Mexico mobile devices, services and applications²⁹ record the highest levels of penetration and adoption.³⁰ Mobile operators provide differential usage plans and in designing their offers, mobile carriers decide how to compete on prices and *quality* with competitors.

75. The inclusion of zero pricing for some popular applications is one element to maintain, engage and retain users, and can be considered a *quality* product's attribute. With this strategy, they can increase the possibilities of attracting and retaining users, or promoting the adoption of own or affiliated applications. To generate these effects, the zero price is offered in applications that, by themselves, have high retention rates (e.g. Facebook, WhatsApp, Twitter and others).

76. On the other hand, fixed carriers offer free services on promotional or permanent conditions for similar reasons. Those strategies and associated business models suggest that traditional services attempt to protect, preserve or increase their customer base.

9. Analytical Tools

77. Zero pricing does not foreclose related practices from competition study, enforcement and advocacy. Criteria and methodologies provided in the LFCE prevail as

²⁸ The IFT is considering issuing guidelines on Net Neutrality pursuant the powers granted by the Federal Law of Telecommunications and Broadcasting (LFTR). Articles 145 and 146 establish general criteria on that matter for regulatory purposes. Concisely, the controversy is whether the practice of zero rating violates the spirit of network neutrality principles (e.g. if zero rated data is treated differently than other data in a way that influences consumer behavior).

²⁹ For example, according to the IFT report of plans and rates of mobile telecommunications services (2016-2017), in 2017 all plans included one or more social networks (Facebook, Twitter and or WhatsApp). IFT (2017). Available in Spanish at: <http://www.ift.org.mx/sites/default/files/contenidogeneral/usuarios-y-audiencias/evolucionmovil7dic2.pdf>

³⁰ Mobile devices (especially smartphones) and application are the most used. Their use report a wide range of daily activities that far exceeds those reported for other technologies. See for example Deloitte (2017) Survey on Habits of Mobile Users in Mexico 2017, available in Spanish at: <https://www2.deloitte.com/content/dam/Deloitte/mx/Documents/technology/Global-Mobile-Consumer-Survey-Mx2017.pdf>.

useful tools to identify the attributes of products involved.³¹ However, their application especially in digital and multisided platforms require more information and sharpened analytical tools to understand the economics, incentives, objectives or effects and dynamics on zero pricing and associated practices.

78. The standard established in the LFCE states a list of specific conducts that are considered anticompetitive (i.e. *relative monopolistic* practices) when:

- They are carried out by economic agents with substantial market power,
- Their purpose or effect is or may be the undue displacement, to substantially impede access or establish exclusive advantages in the relevant market or a related one (i.e. exclusionary practices). It does not include exploitative practices, and
- There is not an efficiency defense (i.e. efficiency gains derived from the conduct to be counted as a mitigating factor that might offset the anti-competitive effects).

79. In merger cases, the analysis focuses on identifying concentrations which purpose or effect is to hinder, harm or impede competition and free market access regarding equal, similar or substantially related goods or services. Legal standard requires considering whether the concentration:

- Confers or may confer or strengthen the resulting entity substantial market power, by which free market access and economic competition may be hindered, diminished, harmed or impeded,
- Has or may have the purpose or effect of imposing barriers to entry, impeding third parties access to the relevant market, to related markets or to essential facilities or of displacing other Economic Agents,
- Substantially facilitate anticompetitive practices, and
- Has an efficiency defense.

80. The LFCE is applicable to economic agents, a figure that applies to any form of participation in economic activity, either for profit or non-profit. It also recognizes that competition analysis can include the relevant market(s) in which the practice is carried out, but also in related markets where their impacts take place. The criteria and methodology for relevant market definition provides the analytical framework to examine and to evaluate competitive concerns in any type of market.

81. In fact, the criteria for market definition does not refer to price, but the possibilities of substitution. In determining the existence of market power, the law calls to assess the ability to unilaterally fix prices or restrict supply (i.e. by any other mean different to prices, for example quality, diversity or other attributes), without competitors being actually or potentially able to counter balance such power. Thus, all legal prerequisites provided in the LFCE encompass the assessment of practices involving zero

³¹ Some studies reveal that the analysis of zero-price markets accent the supply side, thus impeding a comprehensive analysis that includes also demand side considerations. See for example Newman, J. (2015), *Antitrust in Zero-Price Markets: Foundations*, University of Pennsylvania Law Review, pp. 154 – 158, available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2474874.

pricing and/or multi-sided platforms and their impacts on competition, on a case-by case basis.

82. Due to the casuistry that can surge from all possible combinations of quality considerations in different business models, the competition analysis is well suited to monitor and assess –on case-by-case basis– the possible effects. Therefore, the analysis can provide evidence to decide whether to intervene or not to, by enforcing competition provisions, take action in collaboration with other authorities, carry out market studies, and/or advocating for appropriate regulations and policies.

10. Potential harmful effects

83. Recent studies identify that zero pricing has positive effects that consist, among others, in: (1) higher demand and rates of penetration and adoption of applications, content, services and devices;³² (2) facilitating entry and innovation (i.e. to generate the scale and adoption necessary to become competitive with existent ones); (3) diversity by means of differentiated products and usage plans or formats, and (3) greater innovation in creating competitive offers.³³ Therefore, it could intensify competition, reduce tariffs and/or increase quality, which could benefit end-users and, ultimately, be desirable from a public policy perspective. However, its use may also generate competition concerns.

84. As competition authority and sectoral regulator,³⁴ based on competition criteria and methodology, the IFT studies potential impacts of zero pricing in order to identify and properly assess the impacts of zero pricing. In general, foreclosure –through discriminatory access,³⁵ exclusive contracts or any other exclusionary conducts that prohibit or impede access to rival’s content– arises as one relevant risk.³⁶

85. Anticompetitive foreclosure may arise when the entity using zero pricing –along or in combination with other conducts– has market power. In zero pricing it is necessary determine if other providers can replicate the offer,³⁷ otherwise it may be an unduly

³² For example, the offering of plans that include the consumption of data at zero price in some, but not all, applications can attract a group of users different from those who would choose other types of usage plans.

³³ Nera (2015). The Economics of Zero Rating. Available at: <http://www.nera.com/publications/archive/2015/the-economics-of-zero-rating.html>

³⁴ Sectoral Law, the LFTR, establish that in exercising its powers as sectoral regulator, the IFT must promote and protect competition in telecommunications and broadcasting. In practice, the IFT follows adopts competition principles, criteria and methodologies.

³⁵ The potential impacts of zero pricing can be reinforced with other practices, such as the installation of determined content/application or product on the devices by vendors or providers, pre-selecting products instead of leaving the user to exercise their right of free choice.

³⁶ On (big) data there are concerns about the accumulation on few integrated entities of data collected from diverse zero priced products (e.g. applications and environments), its processing and transformation into valuable users’ information (e.g. profiling).

³⁷ In addition, under sectoral regulatory provisions, major carriers (Telcel and Telmex) declared members of the Preponderant Economic Agent in telecommunications sector are subject to asymmetric regulation that impose them replicability obligations. They must provide access in compliance of the criteria of equivalence of inputs, at technical and economic (i.e. retail prices

conduct to foreclose or deter competitors. Replicability of zero priced products should generally not be a concern in relation to content that is generally available over the internet, and certainly not for content freely available.

86. Although the LFCE provides the legal criteria and methodology to evaluate markets, conducts and mergers that involve the use of zero pricing, identifying or assessing a foreclosure may prove to be complex, especially in highly differentiated, dynamic and innovative markets.³⁸ In zero pricing, one entity (e.g. an application or the mobile operator) can decide to apply zero pricing to specific content, which could be provided by an unrelated, related or integrated party in upstream or downstream markets, depending on the model business and the value chain involved. If the deciding entity has substantial market power, it can generate risks to the competition if it forecloses or deters competitors of the zero priced product.

87. In identifying and assessing those effects or impacts, based on *non-price* attributes such as *quality*, it is necessary to sharpen the tools in order to avoid fallacies or biases, and surpassing the impossibility to quantify some features or the lack of direct measures or indicators.³⁹ In turn, those innovations in analytical tools must pass the judiciary scrutiny, and therefore must be sustained in as much evidence as possible and a sound theory of harm, as well as previous advocacy and collaboration with judiciary to exchange information about zero pricing and related practices.

88. In the study of zero pricing, information about plans and offers becomes relevant, especially to assess substitution and market power.⁴⁰ For this reason, the IFT has developed some tools to gather information, especially about pricing strategies of mobile carriers. Through a public online platform,⁴¹ all telecommunication carriers (i.e. license holders and Virtual Mobile Operators) must register their usage plan offers. This information is public and it is used to carry out market's monitoring and assessment for competition and regulatory purposes.

89. The negative impact of market foreclosure for users can involve (i) increased exposure to advertising on one side of the platform; (ii) higher prices or price discrimination of advertising on another side of the platform; (iii) unilateral imposition of

applied) levels of both fixed and mobile wholesale services. Equivalence of inputs is established with the purpose of preventing non-price discrimination, and demands that the preponderant operator deliver all the relevant information and services to requesting third parties, including MVNOs, under the same conditions it applies to its own operations, which encompasses prices, QoS, deadlines, systems, processes and reliability.

³⁸ Newman, J. (2016), *Antitrust in Zero-Price Markets: Apps*, Washington University Law Review, Vol. 94(1). Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2681304.

³⁹ For example, as in the "cellophane fallacy", the observation of quality attributes and their levels in a market already affected by anticompetitive conducts would be different from those corresponding to competitive conditions, as a result of the exercise of market power.

⁴⁰ For example, the occurrence of certain events, such as system failures could become a source of information for authorities, in order to measure the degree of substitution between services on the demand side and identify competitive pressures or substitution. For example, in February 2014 a failure of WhatsApp service worldwide caused a transfer of users to other platforms.

⁴¹ IFT. *Registro Público de Concesiones*. Available in Spanish at: <http://ucsweb.ift.org.mx/vrpc/>

contracting or subscription conditions by the suppliers that may reduce the protection of personal information.

90. Those elements or attributes can be included into the competition analysis as *quality* features to the extent of restricting the offer, but also some of them can be considered as a matter of consumer rights protection or other regulatory and policy areas. Having so many edges (e.g. competition, security, privacy, jurisdiction on worldwide providers, impacts on net neutrality) the study and proper intervention to deter harmful zero pricing practices require, undoubtedly, the collaboration of diverse national and international authorities.

91. In that regard, the IFT as competition authority and sectoral regulator has undertaken unilateral and collaborative actions in order to provide information to final users and a guide for their choices, ultimately reducing asymmetries. The IFT, as part of its collaboration with the consumer protection authority,⁴² has settled mechanisms for automatic exchange of information between them and with telecom suppliers in order to abbreviate the time to respond users' complaints, and to plan and coordinate joint actions in defense of consumers.⁴³

92. Going further, especially in innovative and new models, the study of zero pricing offers (e.g. through market studies) becomes relevant to understand competition dynamics and its relevant quality determinants, and to have a timely and appropriate intervention through enforcement, collaboration or advocacy.

93. Given this prospective, IFT's challenges, as competition authority and sectoral regulator, are promoting innovation and avoiding favoring one business model over another. Therefore, if regulation is necessary, it must be fully justified and proportional to the purpose pursued.

11. Challenges

94. The IFT, as a competition authority, identifies that the main challenge in the analysis of markets that involve the provision of goods or services at zero price corresponds to the inclusion of non-price elements into the analysis of conducts and mergers relevant to point out and to assess the features and dynamics of competition process, especially in innovative markets.

95. In such task, it becomes relevant to identify and understand the specific underlying business model and value distribution across the correspondent value chain. Analysis of offline traditional services are less difficult to carry out, in spite of lack of complete information or the necessity to use unquantifiable or indirect indicators to define the markets, market power and the conduct's effects. However, online products show a crescent innovation and combination of business models, deploying platforms with multiple sides making the analysis increasingly complex. In this context, in order to be able to identify competition concerns in terms that adequate to legal provisions, it is

⁴² The Federal Attorney's Office of Consumer (PROFECO) empowered to enforce the Federal Law of Protection to the Consumer.

⁴³ For more details, see the tool "*Portal de Usuarios*". Available in Spanish at: <http://www.ift.org.mx/portalusuarios>

necessary to understand the markets' incentives, participants' models and how they interact through a comprehensive analysis of supply and demand. Methodological tools must also be adapted to analyze zero priced markets and related conducts, in order to identify and include relevant quantitative and qualitative information of non-price attributes or features and their impacts on competition dynamics.

96. Competition authorities' decisions on these practices shall be based on sound information and evidence, in order to provide certainty to market participants, to avoid hindering innovation and legitimate competition, and to overcome the judicial screening. Competition analyses and decisions cannot be based on assumptions about the variables relevant to the competitive process or about the possible effects derived from a practice or concentration, but on evidence even if it is indirect or unquantifiable. In this regard, it is necessary to have information that allows identifying the quality dimensions relevant to the competition, as well as evaluating possible impacts on said variables, in the context of the theory of the damage posed.

97. The competition authority, by its own means or in collaboration with other authorities, must obtain information, monitor and study the markets. This continuous analysis of the markets allows competition authorities to have a timely intervention through enforcement, collaboration or advocacy in order to identify, prevent and deter harmful practices for competition, or warn of possible wrongdoing in other related matters. Information requirements and the market studies can be useful tools for this purpose.

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