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“Comparative analysis of the Telecommunications Directives of the
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Jose Maria Contreras Padilla

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MinR Dr Matthias Tramer

Abstract

In dieser Arbeit wird die elektronische Kommunikationsregelung in der Europäischen Union und in Mexiko untersucht. Die Arbeit konzentriert sich zunächst auf eine Betrachtung von Telekommunikationsrichtlinien und -prozessen in der Europäischen Union. Daraufhin folgt der Vorschlag einer vollständigen und homologierten Regulierung für die Europäische Union und ein Vergleich mit der relativ neuen Gesetzgebung und Regulierung für die Förderung des Telekommunikationssektors in Mexiko. In Bezug auf die Entwicklung und das Wachstum der Telekommunikation und die Förderung des Wettbewerbs in Mexiko wird die Europäische Union als Referenz für gute Praktiken bzgl. Politik und Leitlinien herangezogen. Verschiedene Erkenntnisse erforderten es, bewährte Praktiken von verschiedenen Mitgliedsstaaten der EU zu untersuchen. Laut der neuen mexikanischen Regulierung werden einige Praktiken auf Grundlage von EU Modellen angewandt, während andere Praktiken auf neuen Tendenzen basieren, die als innovativ und unkompliziert angesehen werden könnten. Dieser Vergleich zeigt Unterschiede und Gemeinsamkeiten auf, die auch die unterschiedliche Entwicklung und Ziele der EU und Mexikos belegen.

Diese Arbeit bietet auch einen Überblick über den neuen Vorschlag zur Entwicklung eines europäischen elektronischen Kommunikationskodexes – ein Versuch zur Harmonisierung von Prozessen und Regulierungen in der EU. Die Initiative konzentriert sich auf die Schaffung eines neuen Integrationsniveaus und Bemühungen, Gelegenheiten zu maximieren, den Wettbewerb zu fördern, grundlegende Nutzerrechte zu schützen und zu gewährleisten, in einem gemeinsamen Markt mit inklusive aller Mitgliedstaaten

Abstract

This paper provides a comparative analysis of the electronic communication regulations in the European Union and Mexico. The thesis focuses on the process and implications of the European Union Directives, as well as on the proposal of a full and harmonized regulation in the European Union, and the relatively new legislation and regulations adopted in Mexico to promote and develop the market of telecommunications in the country.

It is important to set the growth, development and promotion of competition in the telecommunication market. The European Union is often implementing the best policies, practices, and guidelines to be followed by Member States in order to balance the Internal Market. Different approaches to implementation of policies and diverse forms to implement the Directives into the national laws, made it necessary to investigate the roles and indicate the best practices of implementation and the extent to which Member States implemented the optional clauses of the Directive to their national legislation. Some policies and regulations of Mexico are based on similar models as those applied in the EU, as well as the other practices are formed using new tendencies that could be taken as innovative and straightforward. The comparative analysis will show differences and similarities of the development and different objectives in the telecommunications market implied by the EU and Mexico.

The paper establishes an overview of the new proposal to develop the European Electronic Communications Code, which represents an effort to harmonization of regulation in the telecommunications area within the EU. The initiative focuses on the creation of a new level of integration and efforts to maximize opportunities, encourage competition, protect and guarantee the basic user rights, in a common market with every single Member State.

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List of Abbreviations

CODEX – Electronic Communications Code

COFECO – Comisión Federal de Competencia Económica (Federal Economic Competition Commission)

COFETEL – Comisión Federal de Telecomunicaciones (Federal Commission for Telecommunications)

DSM – Digital Single Market

EC – European Commission

ECC – Electronic Communications Code

ECJ – European Court of Justice

EU – European Union

ICT – Information and Communications Technology

IFT – Instituto Federal de Telecomunicaciones (Federal Institute of Telecommunications)

ITU – International Telecommunications Union

LFT – Ley Federal de Telecomunicaciones y Radiodifusión (Federal Law of Telecommunications)

MS – Member State

NAFTA – North American Free Trade Agreement

OECD – Organization for Economic Co-operation and Development

OFCOM– The Office of Communications for the United Kingdom

PTS – Post and Telecommunications Agency of Sweden

SCT – Secretaría de Comunicaciones y Transportes (Secretary of Communications and Transport)

UK – United Kingdom

UN – United Nations

WTO – World Trade Organization

1. INTRODUCTION

This paper presents an overview of the directives in the area of electronic communications, namely the Framework Directive¹, the Access Directive², the Authorization Directive³, the Universal Service Directive⁴, Privacy and the Electronic Communications Directive.⁵ Moreover, it focuses on the national regulations applicable in the Member States, which are to be compared with Mexican regulations in the field of telecommunications, such as Mexican Constitution, Federal Law of Telecommunications and Media, and applicable rules.

The structure of the paper allows us to understand the basic elements of the abovementioned directives, briefly showcase the objective of the legislation as described above and its impact on the relative product market, to present the measures taken to create or empower authorities of one the EU Member State and to present the framework and the main attributions conferred by the Mexican reform. Moreover, the thesis elaborates on the importance of the telecommunications market around the world and the benefits it provides, such as greater consumer choice, lower call costs, and higher standards of services.

The paper describes characteristics and main attributes of the Directives and gives examples on how the MS have adopted them. The Mexican legislation is analysed on the basis of the EU Directives as a reference point or a comparative guide to show similarities or differences between the EU and Mexico.

In the second section, the main focus is on the importance to regulate the telecommunications market, including a brief overview of the value of the market itself for countries and facts that motivated the liberalization of the market. Moreover, it includes a brief history of telecommunications, mentioning the importance of technologies in a diverse period, the relation and advances of these technologies before the implementation of the abovementioned EU

¹ Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services (Framework Directive) [2002] OJ L108/33

² Directive 2002/19/EC of the European Parliament and of the Council of 7 March 2002 on access to, and interconnection of, electronic communications networks and associated facilities [2002] (Access Directive) OJ L 108/7

³ Directive 2002/20/EC of the European Parliament and of the Council of 7 March 2002 on the authorisation of electronic communications networks and services [2002] (Authorisation Directive) OJ L 108/21

⁴ Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services [2002] (Universal Service Directive) OJ L 108/51

⁵ Directive 2002/58/EC of the European Parliament and of the Council of 12 July 2002 concerning the processing of personal data and the protection of privacy in the electronic communications sector (Directive on privacy and electronic communications) [2002] OJ L 201/37

Directives. In regard to the Mexican legislation, there is an overview of how the regulation attribution developed through time up until the last amendment.

The Framework regulation is the most important legislation for all the EU Member States, therefore, the third section is dealing with questions related to duties of telecommunications authorities. This Framework empowered new authorities to collect and provide information and to make their actions more transparent. It also touches upon the application of remedies related to the provision of services, management of radio frequencies, declaration of significant market power and sets new rights to protect the parties against these authorities when enforcing their powers. It is important to explain the major changes in general tasks of EU authorities introduced by the implementation of the Framework directive as well as its influence on regulation related to Mexican authorities.

The Access Regulation Directive is an important part of the telecommunications legislation; therefore, the third section describes some of the interconnection provisions, information requirements and main obligations of telecommunications authorities and decisions that should be taken to grant an access to the telecommunications market for new companies and undertakings that already participate in the market. It is important to enlighten diverse attributions that were implemented to legal systems of Austria and Mexico by their national acts.

The Authorization Directive, which is described in the fourth part, elaborates on the functions of national authorities, namely, the control function, which helps to manage the participation of the undertakings in the telecommunications market, the granting licenses and permissions function, and registering the notifications function. The orientation to a simpler authorization and easier methods to provide services and to reduce bureaucracy is marked as a trend among the EU and Mexico. However, those methods are adopted to different extent as is discussed in the paper.

Furthermore, the paper outlines the general characteristics and trends of implementation of the Universal Service Directive in the EU and Mexico.

Questions regarding the Privacy Directive are discussed in later section. The Privacy Directive is a key element for the actual electronic communications and is intended to protect users of the electronic communications, their information and strength their defense of the right to privacy.

In most EU MS, Spain in particular, the right to privacy is set on the national and EU level, while in Mexico new policies concerning privacy are being implemented only now.

Finally, in the last part, we will discuss the proposal to establish the European Electronic Communications Code⁶ that revolutionizes the technology in the telecommunications market. We will also look to the potential consequences of implementing this Code. Furthermore, the paper focuses on benefits of the harmonized regulation for the MS.

⁶ European Commission, “Proposal for a Directive of the European Parliament and of the Council establishing the European Electronic Communications Code” (Recast) COM/2016/0590 final - 2016/0288 (COD)

2. BACKGROUND OF THE ELECTRONIC COMMUNICATIONS REGULATION

2.1 Why is it important to regulate Telecommunications?

With the time, a huge number of state owned telecommunications operators were privatized and a wave of pro-competitive and deregulatory telecommunication policies appeared in the world. The actual services are based on the delivery of telecommunication services. The study and analysis around the telecommunications can be organized in three different fields that interact within each other: economy, technology and regulation.

During the last century, the evolution of the telecommunications and the changes of the State policies within each country; from having state-owned companies to the privatization of them, has led to a huge step out to the liberalization of the markets and the establishment of new regulations to balance that situation. Some of those factors that motivated the liberalization were:

- a) The liberalization improved the faster growth and innovation on the market, as well to get a better customer service.
- b) The need of investment of private capital to improve the networks and therefore provide new services to the consumers.
- c) The Internet development and penetration, including all the new services that the internet carried.
- d) The development and growth of the wireless networks, including all the new services of telecommunications that could be provided in a convergent environment.
- e) The increasing number of international participation and trade in communications services, that allows major participation of global companies or the international development of the local companies of each state.⁷

The complex structure and systems often confuse the services and markets, however the technological evolution grants efficiency in the use of infrastructure, and sometimes generate

⁷ Intven H, Telecommunications Regulation Handbook (1st edn, InfoDev 2000), pg. 1-1.

inequality while the regulation is developed, therefore it is sometimes hard to follow the rhythm of evolution in services.⁸

The evolution of technologies has led to the use of the same infrastructure for the delivery of most of the services, even so if they are not delivered with the use of spectrum, defining that as the convergence of all the services.

The communications law has per object the regulation and order of telecommunications in all its fields. Taking in consideration the formulas and obligations established by the countries in ITU, the highest organism in telecommunications around the globe. First, was founded, as the International Telegraph Union to after became a specialized agency of the UN in regard of telecommunications.

The regulatory intervention is considered as a need to establish clear and transparent rules to authorize licenses, follow state policies, establish obligations between operators of telecommunications, promote universal access, promote investment, increasing participation on the markets and foster competition, development and support of new standards, protect consumers, optimize use of scarce resources, among others.⁹

The objectives, which each country follows to regulate telecommunications, may be different, depending on the principles or goals set by each of them. Some countries consider telecommunications as an essential public service, meanwhile other States want that the companies supply the services in a consistent manner with major penetration and quality respecting the role as merely regulator.

Recently, the new regulation practices are oriented to deregulate the markets, some of the old regulatory practices have proved that while the market is more advanced and effective these regulatory barriers stop the development and convergence. The new trends are proposed to regulate markets in a general way, just following the regulatory objectives and trying to establish general rules that promote technological development and convergence.

⁸ Federico González Luna Bueno, Gerardo Soria Gutiérrez and Javier Tejado Dondé, La Regulación De Las Telecomunicaciones (Miguel Ángel Porrúa 2007) pg.20.

⁹ Intven H, Telecommunications Regulation Handbook (1st edn, InfoDev 2000), pg. 1-2.

2.2 Establishment of the EU's regulatory framework for electronic communications

The telegraph is considered as the oldest service of telecommunications and a lot of notable characters participated on his creation since the XVIII century. But not until, 1836 that Samuel Morse brought the best proposal of a system to codify the messages. The Military interest in this system helped to his expansion in Europe and North America, finding in them a way to shorten distances and keep contact within all the communities in the same territory. Europe provided the main knowledge to develop the wireless telegraph using frequency bands and being installed in almost all the transatlantic ships that crossed the ocean. All this potential increases the interest to control and use the resources of every State.

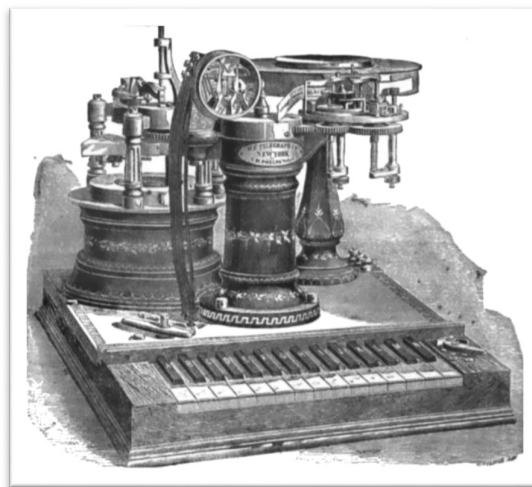


Fig.1 Phelps' Electro-motor Printing Telegraph from circa 1880, the last and most advanced telegraphy mechanism designed by George May Phelps.¹⁰

After that period, everything changed, the telephone appeared, the broadcasting took a huge role after the first World War, the television, the space communications and the beginning of the internet transform all the way that people pictured the world, and thanks to the electronic industry and development, prepared the EU for a new era, taking control to provide the services mostly the State.

¹⁰ Phelps' Electro-motor Printing Telegraph from circa 1880, the last and most advanced telegraphy mechanism designed by George May Phelps, (1880) <<https://www.thoughtco.com/the-history-of-the-electric-telegraph-and-telegraphy-1992542>> accessed 26 June 2017

The EU telecoms policy goes back to the 80's, when the radical changes in technology were taking part and the use of the telecommunications was reaching levels that couldn't be managed by the state monopolies that controlled the networks and provided the services.¹¹

The EU directives are considered as legislative acts like a model of law that obliges the MS to modify the national juridical order, and establish on the law the principle that grants what is proposed in the directive, with the freedom of the form that will apply and the means that will use to extend the conditions in his national law.¹²

The Commission of the EU created the Directives related to the competition in the markets in telecommunications terminal equipment in 1998 and the competition in the markets for telecommunications services in 1990, that have been modified looking for a harmonization of the applicable normativity and opening for total competition.

In 2002, understanding the technological evolution and the convergence of telecommunications with media and information technologies, considering that there was already effective competition in the telecommunications market, the European Parliament and the Council of the EU issued the regulatory framework for electronic communications. The Framework Directive, Access Directive, Authorisation Directive, Universal Service Directive, and the Directive on privacy and electronic communications formed these regulations. These Directives are the most important in regard to the current applicable regulation.

2.3 Evolution of the regulation for the telecommunications in Mexico

The Panorama in Mexico, passed through different situations, in the 40's the broadcasting and telecommunications were regulated by the General Law of rights of Ways for Communications. In the 60's a new law for radio and television was approved by the Mexican Congress. This is an evidence of how powerful the broadcasting services were in that period.

The main change in the telecommunication regulation in Mexico started in the 80's and 90's when the Mexican government, promoted the commercial liberalization and the market opening

¹¹ Liikanen Erkki, Telecommunications Seminar "The European Union Telecommunications policies" Speech/01/356

<https://www.google.at/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKewj3npa5wtPUAhVGNxQKHVB3CEoQFggTMAA&url=http%3A%2F%2Feuropa.eu%2Frapid%2Fpress-release_SPEECH-01-356_en.pdf&usg=AFQjCNGY5guNaX1RV-HWtLywcCsAsufDgg> accessed: 23 June 2017

¹² EU glossary of summaries <http://eur-lex.europa.eu/summary/glossary/community_legal_instruments.html> accessed: 23 June 2017

without restriction of the services, the restructuration of the State companies deciding to privatize them, reduction of social programs, support for major foreign investment and finally the deregulation associated with the administrative and bureaucratic reduction. All of them applied by the President of Mexico in that time Carlos Salinas de Gortari, showing a huge impact and development in the industry.¹³

Different Laws and rules were reformed and applied during a long period, but anything drastic that improved the market or impulse the development, until 1995 when the Federal Law of telecommunications was issued and established the main rules for the regulation of networks and services in that field. Respect to this law, where the mandate was that the Congress will create a new institution that will regulate the principles established in that law, creating the new Federal Telecommunications Agency COFETEL.

In 2013, the major constitutional reform was made by the Congress recognizing as human rights the access to information and communications technology, broadcasting and telecommunications services, including broadband and the Internet. The new Reform allows a major foreign investment in telecommunications, a new convergent concession regime with the objective to deregulate the processes and make more efficient grant licenses, promote the net neutrality, access and interconnection services, the use of State goods for the deployment of telecommunications infrastructure and Must Carry and Must Offer obligations. As well, transformed the previous entity that was part of the SCT into a most powerful entity with his own budget, independence in de decision making, and as the authority in competition in the market of telecommunications and broadcasting. This entity oversees the management and promotion of the spectrum; networks, provision of broadcasting and telecommunications services, sharing of infrastructure, among other attributions.¹⁴

The Constitutional Reform of 2013 is having now an economic impact in the telecommunications market and broadcasting, presenting a major challenge to Mexican government to develop a competitive and deregulated environment.

¹³ Jorge Fernández Ruiz and Javier Santiago Sánchez, Régimen Jurídico De La Radio, Televisión Y Telecomunicaciones En General (Univ Nacional Autónoma de México 2007). pg. 63-64

¹⁴ Federico Hernández Arroyo, "Mexican Telecommunications and Broadcasting Law to enter into effect 13 August 2014" (Global Media and Communications Watch, 5 august 2014) <<http://www.hlmediacomms.com/2014/08/05/mexico-new-telecommunications-and-broadcasting-law-to-enter-into-effect-13-august-2014/>> acceded: 23 june 2017

3. FRAMEWORK REGULATION

3.1 Implementation of the framework directive in the EU

With the aim of convergence of the telecommunications, media and information technology sectors The EU decided that all these areas should be covered by a single regulatory framework for a common European market, that was presented in 2002 with the Framework Directive.¹⁵

The purpose of implementation in the Member States of the Framework Directive is the establishment of the Internal Market for telecommunications services through the implementation of open network provision. It is important to mention the main characteristics that the Directive set¹⁶, such as:

a) National regulatory authorities:

One of the most important obligations that this Directive establishes is that the national authorities' independence should be guaranteed by the MS, and the decisions should be adopted without prejudice of the institutional autonomy and the Constitutional obligation of each State.

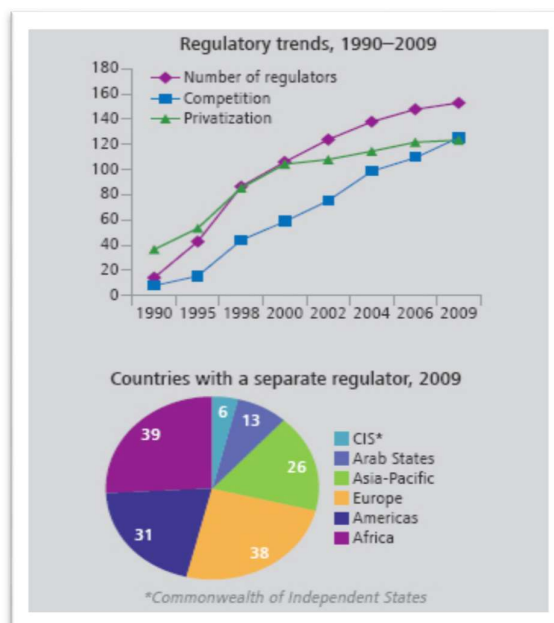


Fig.1 Portrait of an era in regulatory reform, regulators tendency after new trends¹⁷

¹⁵ Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services (Framework Directive) [2002] OJ L108/33

¹⁶ Ibid.

¹⁷ ITU World Telecommunication Regulatory Database “Trends in telecommunication reform” (2009) <<https://www.itu.int/net/itunews/issues/2010/03/15.aspx>> accessed 23 June 2017

b) Right of appeal

The Directive enlighten that any party who is subject of a decision by the regulation authority of any state member must have the right to appeal, under the figure of the Court or specific process designed with independence with the authority, to grant the rights of the party and a fair process.

c) Provision of information

Should be ensured by the MS that the undertakings providing services provide all the information required and necessary for national authorities, including financial statements, and that request of information must be motivated by the performance of the task followed by the Directive and local legislation.

d) Consultation and transparency mechanism.

Concerns to the Member State that the interested parties can participate and comment on the draft when the national authorities intend to take measures which have a significant impact on the relevant market. To grant transparency that consultation should be publicly available, with the only exception of confidential information according to the Community and National Law.

e) Consolidating the internal market for electronic communications

All the Member States should cooperate to the development of the internal market with the Commission in the clearest environment in a way to accomplish all the objectives settled by the Directive and the specific Directives. To accomplish this consolidation must be established a procedure for the consistent application of remedies and the implementation of provisions like the definition of a relevant market and the decision to define undertakings individually or jointly with significant market power

f) Tasks of national regulatory authorities

The principles that should be adopted by the regulatory authorities are related to establish an effective competition, promote the development inter alia, a regulation technologically neutral, protection of consumers, of personal data, privacy, removal of entry barriers, promote a non-discriminatory treatment, the cultural and linguistic diversity.

There are main regulatory tasks that must be given to the authorities and reviewed to accomplish all the principles mentioned before, and other that are mandatory to establish better practices and use a common framework among the union, those tasks include:

- management of radio frequencies for electronic communications services,
- numbering, naming and addressing of natural resources,
- rights of way for electronic communications,
- co-location and facility sharing under national legislation, and
- require accounting separation and financial reports to undertakings providing public communications networks or publicly available electronic communications services.¹⁸

g) General provisions

Those provisions are establishing globally other important tasks that must be given and reviewed by the national authorities, such as:

- determinate undertakings with significant market power, adopt recommendations on relevant products and service markets,
- the standardisation to adopt and promote the adoption of standards defined by the European standards organisations,
- interoperability to promote the free flow of information, media pluralism and cultural diversity,
- Harmonisation procedures regarding recommendations and obligations established by the Commission.
- Dispute resolution between undertakings must be solved by the national authorities, unless other mechanism like mediation apply,

¹⁸ Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services (Framework Directive) [2002] OJ L108/33

- Resolution of cross-border disputes, the national authorities should coordinate to define a resolution to the dispute that may include other national authorities.
- The publicity of the information should be maintained that every interested party may access to it and,
- The review of procedures implemented by the MS with the Framework Directive should be reviewed periodically by the EC.

All that conditions and responsibilities are planned to create a common set of regulations, making strong and powerful national authorities that protect the common interest of the users, countries and undertakings that provide services.

3.2 United Kingdom policies (OFCOM)

Since the decision of the creation of the Framework Directive the UK considered that Electronic communications services are essential within the EU to promote the economic growth, technological innovation and social cohesion.¹⁹ It was necessary the creation of OFCOM as the result of different problems within the previous authorities in the UK, when the coordination of diverse responsibilities was shared in the field of the electronic communications. That responsibilities created vast misunderstanding between the activities that each one had in charge.

The adoption by the EU of the new EU regulatory framework, and the obligation for the UK as a EU State Member to promote and apply all regulation of the communications sector, complied with the new EU requirements.²⁰

OFCOM took the responsibilities and powers of five different authorities:

1. Office of Telecommunications, in charge of regulate the telecommunications sector;

¹⁹ Department for Culture Media and Sport of the UK, “UK NonPaper: Review of the Electronic Communications Regulatory Framework” (2015)
<https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/496880/UK_Non-Paper-_Review_of_the_ECRF_20150903FINALDRAFTAnnexAFWRhighlevelobjectivesnonpaperdraftv3EV__1_.pdf> accessed 26 June 2017

²⁰ InfoDev and the International Telecommunications Union, The ICT Regulation Toolkit “The UK's OFCOM-A Converged Regulatory Authority” (2006)
<http://www.ictregulationtoolkit.org/practice_note?practice_note_id=1221> accessed 26 June 2017

2. Radiocommunications Agency, the agency responsible for allocate and manage the radio-frequency spectrum;
3. Independent Television Commission, in charge of the licensing the non-public television services;
4. Broadcasting Standards Commission, the Commission in charge to establish broadcasting standards; and
5. Radio Authority, separately the responsible for license and supervision of independent radio broadcasting services.

The Communications Act of the UK comply with the obligations required by the EU Directives and the UK commitments, promoting the benefits for the EU citizens and development the common single market. Additionally, OFCOM do not require additional barriers of entry or unnecessary burdens to the industry, the publicity of his acts is showed with the diverse public consultation and exercises for proposals and initiatives.

OFCOM accomplish successfully all the tasks defined with the Framework Directive and exercises the complete variety of regulation in the communications networks and services, the UK Communications Act as well was focus in the convergence of the services and the end users.

The Office of communications is one of the most efficient regulators in the EU, their policies have established trends with some of their decision while they are applying the task and recommendations imposed in the Directives, presenting best practices in the implementation of policies that promote competition in the markets, improving the development to new technologies and growth of the communications market.

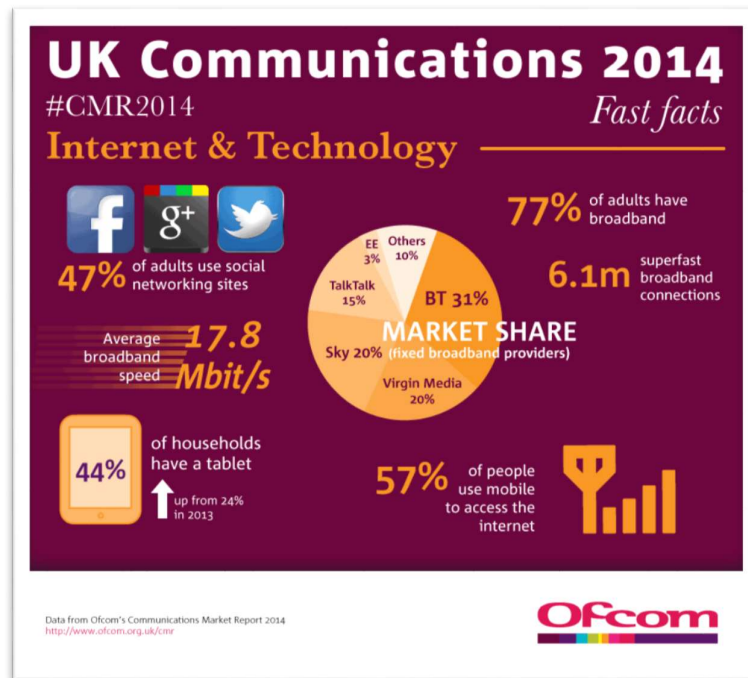


Fig. 2 CMR 2014: fast facts on internet and technology in the UK²¹

3.3 German Policies

In Germany after the Directives were implemented, there is a clear vision of the evolution of the administrative and regulatory organization towards greater autonomy respecting and promoting their own objectives and National law, besides the fact that regulatory authority has been given competence in other economic sectors.

Before the creation of the regulatory body, the Ministry for the Postal Service and Telecommunications (*Bundesminister für Post und Telekommunikation*) was in charge of the telecommunication operator Deutsche Telekom and the regulation of telecommunications. In 1998, the regulatory body called the *Regulierungsbehörde für Telekommunikation und Post*, which was responsible for telecommunications and the postal service, was set up to respond to a government ministry. In 2005 the National Network Agency (*Bundesnetzagentur*) was created

²¹ OFCOM, (Communications Market Report 2014 Facts)
<<https://www.google.com.mx/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwiO8-yTytvUAhXHSiYKHe3PAIgQjRwIBw&url=https%3A%2F%2Fwww.ofcom.org.uk%2Fabout-ofcom%2Flatest%2Fmedia%2Fmedia-releases%2F2014%2Fcmr-uk-2014&psig=AFQjCNECiv5S8JXaGJ-R2z52slD07NOiuw&ust=1498568851702780>> accessed 26 June 2017

as an independent higher federal authority within the sector of the Federal Ministry of Economics and Technology.

The *Bundesnetzagentur* is a multi-sector regulator, having competence in telecommunications, mail, electricity, gas and railways, as well as in electronic signatures. In their scope, the decisions are adopted by the "Regulating Chambers". There are nine of these and each resolve on specific sectors and topics (e.g., the Regulatory Chamber 1 decides on universal service for telecommunications and postal services, as well as on radio spectrum resources; Regulator 3 is responsible for regulating wholesale telecommunications markets, both fixed and mobile).

Stakeholders and users can participate in the procedures of the Regulatory Chambers. Decisions taken by them may not be modified or revoked by the Ministry of Economics and Technology, but may be challenged before the courts.²²

3.4 Mexican framework regulation

However, the liberalization of the Mexican economy and the international agreements signed by Mexico required a change in the legal framework of the telecommunications Sector. The starting point was a Reform to give an overview of competition and free access to markets as the backbone of our economic life and as a fundamental mechanism to promote social welfare.²³

After the Constitutional Reform in Mexico, the new projects include an ambitious agenda regarding towards access to information and guarantees against any attempt to censure in a framework compatible with new information technologies; Institutional modifications of the bodies responsible for regulating telecommunications and protecting the competition process; Extension of their powers and procedures for their professional training. In addition to the formation of specialized courts.

Mexican transformation gradually applies the best international practices, and with the new regime are implemented some similar attributions and tasks as the established in the EU

²² Bundesnetzagentur für Elektrizität, Gas, Telekommunikation, Post und Eisenbahnen, Germany, [2017] <www.bundesnetzagentur.de> accessed 28 June 2017

²³ Rodrigo Morales Elcoro, "*Reforma Constitucional en Materia de Telecomunicaciones y Competencia: Elementos para su reflexión*" (2013) Telecommunications Forum in the Senate of Mexico <https://www.google.com.mx/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwjz6aTz8t7UAhWD0iYKHa10DOEQFggjMAA&url=http%3A%2F%2Fwww.senado.gob.mx%2Fcomisiones%2Fpuntos_constitucionales%2Fdocs%2FTelecom%2FRodrigo_Morales_Elcoro1.pdf&usg=AFQjCNEkHFsVgl7yrt9mwJ_JAXHnRCJgbg> accessed 26 June 2017

Framework Directive. An important example of the similar framework similarities of the task and attributions are:

a) National Regulatory authority

In past years the autonomy of the authority COFETEL was formally instituted since the LFT was issued, which envisaged the creation of a decentralized body of the SCT "with technical and operational autonomy". However, the resolutions of COFETEL as the supreme decision-making body could be reviewed by the SCT when an individual filed a review appeal, this implied that the resolutions of the plenary of COFETEL could even be Modified or revoked by that official.

The Constitutional Reform of 2013 established the creation of the Federal Institute of Telecommunications as a body of this nature, it is though that the maximum autonomy granted to a public entity by the Mexican State is carried out through the figure of an autonomous constitutional body. This does not belong to the Executive Branch, or the Legislative Branch, or the Judicial Branch. It was given powers as a convergent regulator (including content) and even in economic competition, with a collegiate body as the maximum decision authority.²⁴

b) Right of appeal

Is established in the national Constitution that specialized courts in telecommunications and economic competition will be created reliant on the Judicial branch. The decisions of the regulatory body do not have to be modified by the SCT, but only by the competent courts.

Only by the procedure of an indirect rights protection appeal (*amparo indirecto*) against the general rules, acts or omissions of the IFT. It is prohibited to grant the suspension of the act claimed to the IFT, if the procedure is not determined by the specialized courts yet.²⁵

²⁴ Clara Luz Álvarez González de Castilla, "Derecho De Las Telecomunicaciones" (UNAM 2012) pg.105

²⁵ Ley Federal en materia de Telecomunicaciones y Radiodifusión (last amendment published at the Official Journal of the Federation, 27 January 2017)

c) Provision of information

Transparency of information is obligatory for the authority respect their functions, administration, budget decisions and projects, outline the law that the only classified or confidential information shall be considered as such under the assumptions established in the Federal Law on Transparency and Access to Governmental Public Information.

d) Consulting and the transparency mechanism

There are obligations of publicity and transparency, as well as others of a general nature covered by the Constitution, the Federal Law of Transparency and Access Governmental Public Information and the Administrative Law for Procedures. According to the Federal Law to promote transparency and citizen participation, the authority made public consultation to receive comments and opinions from industry, academics, analysts and the public of all the determinations and projects that could be implemented.

e) Consolidating the internal market for electronic communications

The 2013 Constitutional Reform transfers to IFT all the economic attributions in competence formerly performed by COFECO, which includes determining a relevant market and the dominance of an economic agent in it. Therefore, the IFT may determine in a single act the dominance of an economic agent and impose specific obligations.

f) Tasks of national regulatory authorities

With the 2013 Constitutional Reform the IFT assume the functions of COFETEL that were given since his creation in 1996, in terms of spectrum management and the Telecommunications Registry, numbering, naming and addressing of natural resources, co-location and facility sharing.

The Telecommunications Registry will collect all the information about Concession titles, permits, assignments of spectrum, value-added services and assignments of rights and obligations in accordance with the LFT. Likewise, any other document related to the operations of the concessionaires, financial annual reports, permit holders or assignees must be registered in the register when required by law or regulation.²⁶

²⁶ Ibid.

There is a huge difference about the recommendations with the Framework Directive, in Mexico the authority of telecommunications administrate the registration of telecommunications adding all the rights acquired by the companies but, actually to acquire the rights of way depends on a lot of the type of infrastructure to be used, the National electric company possess the right trough their system, or the SCT have the power over streets and national infrastructure.

g) General Provisions

Other general tasks establish by law are:

- Sanction concessionaires who fail to comply with the provisions establish in the law.
- As authority on economic competition in the broadcasting and telecommunications sectors:
 - i. Has the task to regulate in an asymmetric form the participants in these markets to effectively eliminate barriers to competition.
 - ii. Impose limits on the national and regional concentration of frequencies, the concession and the cross-ownership of several media that serve the same market or geographic coverage area
 - iii. To order the disincorporation of assets, rights or parts necessary to ensure compliance with the limits of concentration.²⁷

Under the view of the Framework Directive, the Mexican national authority IFT holds a wide variety of attributions that could be shared with the European markets and may vary among each Member State, but could be considered that accomplish most of the objectives of the Directive.

In Mexico, the regulator of Mexico is a convergent regulator with powers in economic competition, with a collegial body as the authority of maximum decision. The aim of the authority is: the efficient development of broadcasting and telecommunications; regulation, promotion and supervision of the use of the radio electric spectrum, the networks and the services of broadcasting and telecommunications; access to active, passive infrastructure and

²⁷ Ibid.

other essential inputs; the exercise of all powers in economic competition for the broadcasting and telecommunications sectors.²⁸

The growth of the economy and the increase of the participation in the GDP of a country could be ignited by reforms and laws that are efficient and effective.

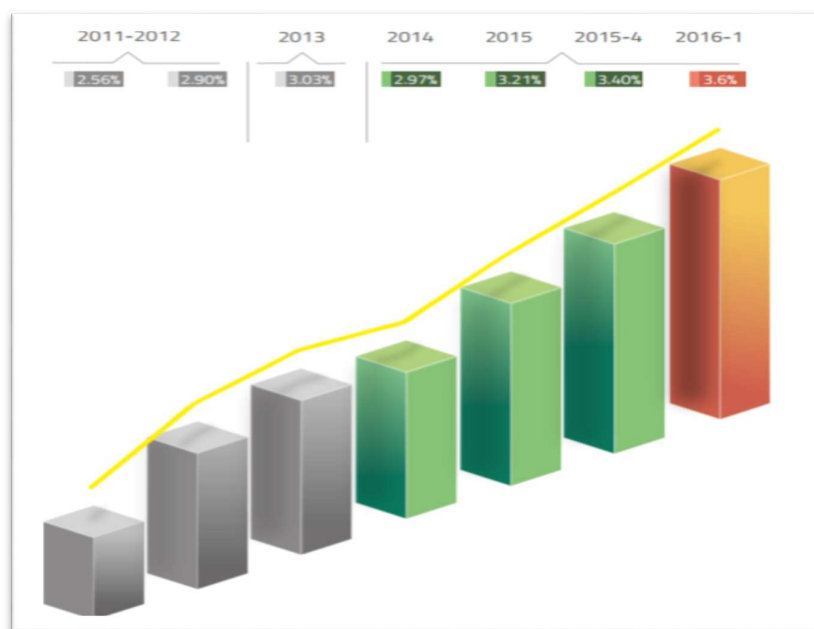


Fig. 3 The annual percentage of GDP in the telecommunications sector before and after the Reform.²⁹

²⁸ Clara Luz Álvarez González de Castilla, “*Derecho De Las Telecomunicaciones*” (UNAM 2012) pg.422

²⁹ Federal Institute of Telecommunications “Las Telecomunicaciones a 3 años de la Reforma Constitucional en México” (2016) < <http://www.ift.org.mx/sites/default/files/contenidogeneral/unidad-de-competencia-economica/a3aniosdelareforma-espanol.pdf>> accessed 26 june 2017

4. ACCESS REGULATION

4.1 Characteristics of the Access Directive

The existence and viability of a competing electronic communications market necessarily requires the access and interconnection of the networks of the different operators. In markets where continue to be large differences in negotiating power between undertakings, and where some undertakings rely on infrastructure provided by others for delivery of their services, it is appropriate to establish a framework to ensure that the market functions effectively.

The objectives of the Access Directive are to maintain competition, to ensure the interoperability of services and to benefit users. Companies must negotiate in good faith with each other the technical and commercial agreements for access and interconnection.³⁰ In any case, to ensure access, interconnection and interoperability, national regulatory authorities must be empowered to intervene on their own initiative or if the undertakings do not reach an agreement.³¹

National regulatory authorities may, in relation to access and interconnection, establish:

- a) non-discrimination obligations (including publication of the disaggregated offer so that unnecessary resources for the required service are not included);
- b) The requirement to maintain separate accounts in relation to interconnection and / or access,
- c) for vertically integrated companies to require transparent evidence of wholesale prices and transfer prices to avoid non-discrimination
- d) access to specific network elements and associated resources (e.g. unbundled access to the local loop) and
- e) measures to facilitate co-location, use of Operating or computing systems, price control (this should allow the recovery of investment and a rate of return) and cost accounting systems.

³⁰ Directive 2002/19/EC of the European Parliament and of the Council of 7 March 2002 on access to, and interconnection of, electronic communications networks and associated facilities [2002] (Access Directive) OJ L 108/7

³¹ Clara Luz Álvarez González de Castilla, “*Derecho De Las Telecomunicaciones*” (UNAM 2012) pg. 372

Member States shall ensure that obligations imposed on undertakings are published and made available to the public, including products and service markets and geographical area. The European Commission should publish cost information that helps to determine user fees.

Regulators may exceptionally impose on vertically integrated undertakings the obligation to transfer activities in wholesale markets for access to a business unit acting independently, if it has been concluded.³²

The Access Directive contains a minimum list of elements, which must include reference offers that are required to be published by operators having significant market power.

4.2 Austrian Policies

The Austrian Regulatory Authority for Broadcasting and Telecommunications was established in 2001. The authority is in charge of the Media and Telecommunications and Postal Service Division and provides operative support for the Austrian Communications Authority, the Telekom-Control-Commission and the Post-Control-Commission.³³

According to the Austrian Telecommunications Act of 2013 some provisions were established making obligatory to provide an interconnection offer to other operators upon request to protect all the operators of public communications networks. All the participants in the market are looking to reach all the users in the market and equal their possibilities through this regulation. The Act allowed the convergence with specific regulation about to strength the competition in Austria.³⁴

Some of the attributions mandated to the authorities are to reduces barriers to market entry for new providers, developing market analyses, guaranteeing open network access, and conciliating in disputes between market participants. Other attribution that the authority has is that they can require to significant market power undertakings to publish reference offers. The new Act allow the convergence to strength competition in Austria. The sector regulation it is different from general competition law primarily because it is defined that in telecommunications companies

³² Directive 2002/19/EC of the European Parliament and of the Council of 7 March 2002 on access to, and interconnection of, electronic communications networks and associated facilities [2002] (Access Directive) OJ L 108/7

³³RTR Austrian Regulatory Authority for Broadcasting and Telecommunications “About RTR“ (homesite, 2017) <<https://www.rtr.at/en/rtr/Ueberuns>> accessed 26 June 2017

³⁴ Federal Act enacting the Austrian Telecommunications Act, [TKG 2003] (as last amended by Federal Law Gazette I No. 6/2016)

recognised as having significant market power will be subjected to specific obligations beforehand with due contemplation of the principle of proportionality.³⁵

It is established in the Austrian Act that every operator of a public communications network is obliged to provide an interconnection offer to other operators of such networks upon request. All the participants in the market involved follow the objective of empowering and improving communication for the users of different networks.³⁶

When an agreement is not settled by the operators, the Authority will be in charge to resolve the conditions under the service will be provided. The resolution of the authority establishes the conditions of interconnection, and substitute the private law as substitute to provide the service.

4.3 Mexican Access regulation

The reform in Mexico generated the new LFT that has the purpose to regulate: the use, exploitation and exploitation of the radio electric spectrum; Public telecommunications networks; access to active and passive infrastructure; Orbital resources; Communication via satellite; The provision of public services of general interest in telecommunications and broadcasting, and the convergence between them; The rights of users and audiences, and the process of competition and free competition of these sectors.

Until the end of 2002, the cellular networks of the different companies operating in Mexico have not interconnected to exchange text messages. Once COFETEL resolved an interconnection disagreement between two large companies forced to interconnect for SMS exchange, mobile users could send their text messages regardless of whether the recipient was a client or not their own service provider.³⁷

For the operator who is a new interconnector interconnection is vital because it needs to offer services to potential customers for those who are also communicating with the users of the network of the incumbent.

³⁵ Ibid.

³⁶ Ibid.

³⁷ Clara Luz Álvarez González de Castilla, “*Derecho De Las Telecomunicaciones*” (UNAM 2012) pg.136

In Mexico, the negotiation of interconnection agreements between the concessionaires of public telecommunications networks according to the LFT has been privileged and with a term of 60 days to subscribe it as soon as one of the parties requests the beginning of the negotiations.

Based on the LFT, the authority must resolve about interconnection disagreements between any concessionaires in the telecommunications network (it does not have to be a main concessionaire as is stated in the WTO Reference Document)³⁸:

- a) At the time in which both parties were requested, or
- b) if requested by either party after the 60-day deadline for negotiation.

Under the LFT all concessionaires of public telecoms networks have been obliged to adopt open architecture designs for the interconnection and interoperability of their networks, and even the legislator established the refusal of interconnection as a cause for immediate revocation of the Concession.³⁹

The concessionaires have been obliged to pre-register the interconnection agreements for their registration in the Telecommunications Registry by IFT, which can be consulted by the public, except for the parties that are confidential or reserved according to the laws Applicable.⁴⁰

The disaggregation has been since the previous Law as an obligation of concessionaries of public telecommunications networks to conclude an interconnection agreement. This obligation implies unbundled access to services, capacity and functions of the network, and should be non-discriminatory tariffs.⁴¹

All concessionaires of public telecommunications networks, in addition to keeping separate accounts for services, have been obliged to attribute to themselves, their subsidiaries and affiliates, unbundled and non-discriminatory tariffs for the different interconnection services under the LFT.

³⁸World Trade Organization “MEXICO - Schedule of Specific Commitments Supplement 2” (1997) <https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S009-DP.aspx?language=E&CatalogueIdList=8035,29439,12917,36575,18021&CurrentCatalogueIdIndex=1&FullTextHash=&HasEnglishRecord=True&HasFrenchRecord=True&HasSpanishRecord=True> accessed 26 June 2016

³⁹Ley Federal en materia de Telecomunicaciones y Radiodifusión (last amendment published at the Official Journal of the Federation, 27 January 2017)

⁴⁰Ibid.

⁴¹Ibid.

5. REGULATION AND DIRECTIVES FOR AUTHORIZATIONS

5.1 Freedom in providing electronic communications networks and services

Open electronic communications market to competition can be affected if there is no simple procedure to authorize the installation and operation of networks or to provide electronic communications services. The Authorization Directive aims to harmonizing and simplifying the authorization procedure for the provision of electronic communications networks and services.⁴²

The Authorization Directive applies to authorizations for electronic communications networks and services, as well as for limited resources such as the radio frequency (radio frequency) frequency bands and the numbers. In the case of networks and services, a Member State may request that a notification be submitted with minimum information for a register of network and service providers. This information should be limited to identify the provider, your address, company registration numbers and contact information, a brief description of the network or service you will provide and the expected start date of the activity.

Granting the right to use frequency bands and numbers, open, transparent and non-discriminatory procedures must be performed; Whereas, according to European case-law, any national restriction must be objectively justified, proportionate and not excessive.⁴³ If any person is interested in obtaining the right to use some frequency, he must apply to the authority, which has a period of six weeks to resolve. If the authority decides to carry out a competitive or comparative selection procedure to determine the person who will obtain the right to use the frequency, that period may be extended without exceeding eight months.⁴⁴

General authorization may only have the conditions set out in the Authorization Directive and must be objectively justified, non-discriminatory, proportional and transparent. Possible conditions include:

- For general authorizations: fees, rules on interoperability and interconnection, provisions on the environment, urban and territorial planning, personal data protection,

⁴² Directive 2002/20/EC of the European Parliament and of the Council of 7 March 2002 on the authorisation of electronic communications networks and services [2002](Authorisation Directive) OJ L 108/21

⁴³ Ibid.

⁴⁴ Ibid.

consumer protection, emergency services in cases of catastrophes and network security against unauthorized access;

- For rights to use frequency bands: service designation, type of network or technology, effective and efficient use, coverage and conditions to avoid harmful interference and
- For rights of use of numbers: designation of service, effective and efficient use and obligation to provide information about subscribers as a directory or public guide.⁴⁵

In compliance with the principle of transparency, MS should publish and keep up to date information on general authorizations and rights of use of frequencies and numbers. The information must be easily accessible, making its best effort the authority to make a synopsis that allows the use of the information.

5.2 Swedish policies

In Sweden, the authority for Post services and telecommunications is known as PTS. The agency oversees the regulation of all the telecommunications networks and services and is responsible for issuing licenses and permissions and for establishing an effective competition in the market. All the providers of services of public communications networks and publicly available electronic communication services are required to notify the Regulator prior of starting operations.⁴⁶

It is established by PTS that licenses to use radio transmitters must be as neutral as possible to the technology and services used. This condition grants the licensee maximum flexibility to choose services to produce and which technology to be implemented.⁴⁷

Sweden implemented a spectrum strategy through PTS using it as a tool that to develop the spectrum planning and licensing. The objective of the strategy is to describe the principles for achieving the Authority's vision for spectrum management.

⁴⁵ Ibid.

⁴⁶ Government Offices Sweden, "23.4 International radio communication and satellite earth station transmitting licenses" (2016) < <http://www.government.se/government-of-sweden/ministry-for-foreign-affairs/diplomatic-portal/diplomatic-guide/23.-firearms-and-international-radio-communication/23.4-international-radio-communication-licenses/>> accessed 26 June 2016

⁴⁷ GSM Association "Report: Licensing to support the mobile broadband revolution" (2012) <https://www.gsma.com/publicpolicy/wp-content/uploads/2012/03/gsma_licensing_report.pdf> accessed 26 June 2016

Licenses are issued by the PTS following an open invitation to apply if it may be expected that there is a shortage of frequencies. The licenses are granted for specific periods of time considering the projects and diverse circumstances such as future and development. The licenses to use numbers do not have a time limit.

The licence exemption is used where there is less of harmful interference and there are no other impediments, certain radio transmitters are exempted from the license obligation, no authorization is needed for the use of radio receivers.⁴⁸

The operators may need permits to install infrastructure to provide services and to develop their networks, inter alia cables, masts, antennas, and base stations. The way rights should be asked with the authority and the use of other infrastructure should be negotiated with the owners.⁴⁹

5.3 Mexican granting of license and concession titles

Previously, in Mexico, a complicated system of concessions had prevailed, the SCT grant the licenses and the authority takes care of the supervision, later another reform grants the authority the power to issue licenses with the opinion of the SCT that establish more than less the same scenario, enter to the market was difficult, concessions were granted by each service, and there were many requirements; It was necessary to enforce the previous law creating artificial barriers. The telecommunications reform brought with it the new model of unique concessions and mandates the establishment of mechanisms for ratifying the regime of permits and concessions for broadcasting.

Foreign investment is allowed up to 49% in the broadcasting sector, except for the case of Telecommunications and Satellite communications in which foreign investment up to 100% is allowed⁵⁰ to promote the participation and development.

The unique concession will be issued to provide all types of public telecommunications and broadcasting services, which will be granted for 30-year terms and could be renewable if the compromises were achieved. The radio-electric spectrum and orbital resources for determined

⁴⁸ Post Services and Telecommunications Sweden “Application forms “, (2016) <<http://www.pts.se/en-GB/Industry/Radio/Application/Application-forms/>> accessed 26 June 2016

⁴⁹ International Comparative Legal Guides “ICLG to: Telecommunication Laws and Regulations 2009“ (2009) <https://www.roschier.com/sites/default/files/telecommunication_laws_and_regulations_2009.pdf> accessed 26 June 2017

⁵⁰ Ley De Inversión Extranjera (last amendment published at the Official Journal of the Federation, 26 June 2017)

use will be awarded in a different concession according to a public bid, previous payment of a consideration, for a term of 20 years, that could be renewable in the same terms.⁵¹

Mexico created special licenses for small rural operators trying to reach the population that still have a lack of mobile connectivity, especially in rural parts of the country.

⁵¹ Ley Federal en materia de Telecomunicaciones y Radiodifusión (last amendment published at the Official Journal of the Federation, 27 January 2017)

6. UNIVERSAL SERVICE REGULATION AND DIRECTIVE

6.1 Universal Service Directive obligations

Telecommunications have been widely recognized as essential for social, cultural, economic, political and democratic development, as well as for the exercise of various fundamental rights. Within the World Summit on the Information Society, both in the Declaration of Principles⁵² and in the Tunis Commitments⁵³ on People the impact of ICTs on almost all of life and consider them a tool for productivity, Economic growth, job creation, good governance, dialogue between people and nations, as well as to improve the quality of life.

The global trend in the liberalization of telecommunications was based on the premise that, given that there is competition in the market, users would have more and better services at lower prices, since operators would aim to increase their competitiveness and supply of services. Services to obtain higher profits. However, the existence of a digital divide is becoming more evident and universal service policies are gaining in importance.⁵⁴

Some of the most successful initiatives to promote the universal access are reforms based on the market related to the liberalization of the mobile sector, in addition with a stable regulatory environment and the succeeding growth in users in developing countries. All those proposals initiatives have changed the market and helped to distribute the shares to close the market gap.⁵⁵

The EU has established an obligation for its Member States to ensure the existence of good quality electronic communications through real competition and freedom of choice, while seeking to meet the needs of the end user where the market does not satisfy them. The service must be available irrespective of geographical location, must be of quality and at an affordable price.⁵⁶

⁵² ITU, “Declaration of Principles: Building the Information Society: a global challenge in the new Millennium“ Document WSIS-03/GENEVA/4-E, 12 May 2004, <<http://www.itu.int/net/wsis/docs/geneva/official/dop.html>> accessed 27 June 2017

⁵³ ITU “Tunis Commitments in the World Summit on the Information Society“ Document WSIS-05/TUNIS/DOC/7-E, 18 November 2005, <<http://www.itu.int/net/wsis/docs2/tunis/off/7.html>> accessed 27 June 2017

⁵⁴ Clara Luz Álvarez González de Castilla, “*Derecho De Las Telecomunicaciones*“ (UNAM 2012) pg.256

⁵⁵ InfoDev and the International Telecommunications Union (ITU), The ICT Regulation Toolkit (2006) <<http://www.ictregulationtoolkit.org/toolkit/1.5>> accessed 26 June 2017

⁵⁶ Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services[2002] (Universal Service Directive) OJ L 108/51

In the EU, the universal service comprises: telephone service provided by at least one operator from a fixed location, with support for voice, fax, data and functional internet services; public telephony; information services for the number of subscribers and telephone directories; measures for accessibility to telecommunication services by persons with disabilities; options or packages of different rates for people with low incomes or with specific social needs; common tariffs throughout the territory of a member country regardless of geographical location and emergency services.

The services covered by the universal service in the EU are subject to periodic review by the European Commission. The services will be reviewed considering the mobility and transmission speeds used by most of the EU users.⁵⁷

The rights of users of the Universal Service Directive are independent and in addition to those provided for in the Community provisions on consumer protection. The rights provided for in the Universal Service Directive, among others:

- a) enter into contracts with service providers which should include limited information;
- b) retain their number regardless of whether another provider is changed (number portability,
- c) access to transparent, simple and inexpensive out-of-court procedures for resolving conflicts over user rights and universal service and
- d) availability of transparent, up-to-date and comparable information on prices, quality, general conditions of access and use of telephone services.⁵⁸

Regarding users with disabilities, Member States must take measures to ensure that they have access to services equivalent to those received by other users and that users with disabilities can benefit from the choice of undertakings and service providers Which is enjoyed by most end users.⁵⁹

The obligation of the governments and authorities to promote inclusion and participation are widely related to the growth of each country, the regions with more penetration are considered more developed than the nations and regions where the telecom are just booming.

⁵⁷ Ibid.

⁵⁸ Ibid.

⁵⁹ Ibid.

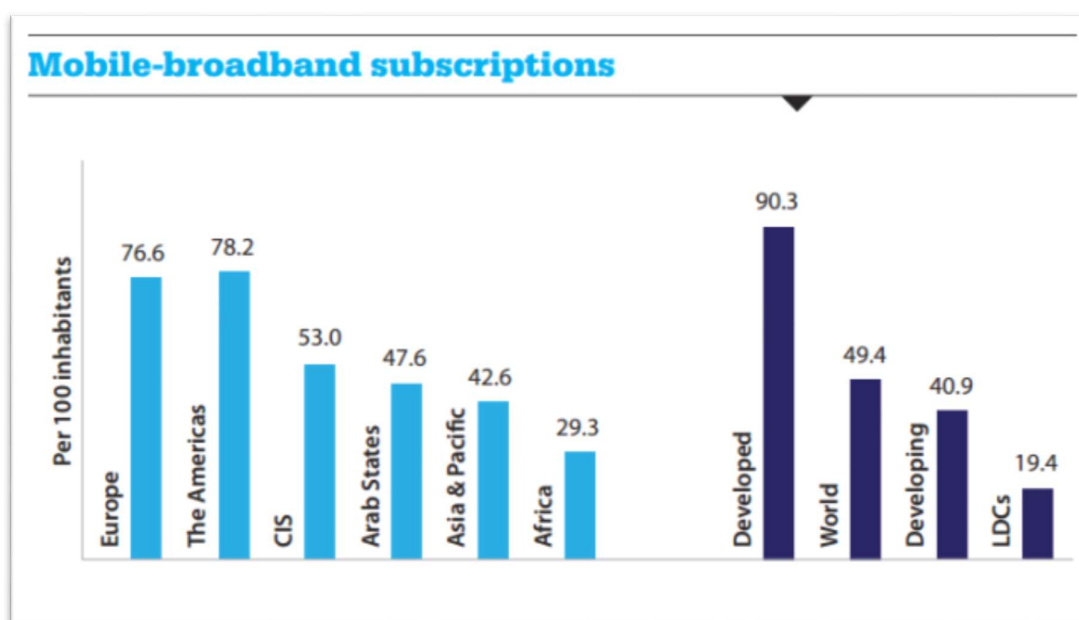


Fig. 4 ITU chart on mobile Internet subscriptions ⁶⁰

6.2 Policies and practices in the United Kingdom

The universal service in the United Kingdom comprises that at least one universal service operator must provide access to the electronic communications network from a fixed location, telephony service, data telephony, data service, access to services (e.g. text-to-voice retransmission service and vice versa, the issuance of accessible bills for visually impaired persons, to give them priority in Service when faults occur, at least 75% of public telephones must be accessible to a person in a wheelchair).

The UK telecoms regulator OFCOM, considers that none of the operators has an excessive burden to fulfil their universal service obligations by considering that the positioning of the operator's brand and advertising on public telephones is Benefits, and therefore the universal service is not financed.⁶¹

Among the obligations imposed on British Telecom, it is also included that the tariffs do not include the payment of additional services that are not necessary and that it complies with

⁶⁰ International Telecommunications Union “ITU chart on mobile Internet subscriptions“ (Telecom industry trends for 2017) < <http://myzone.dwwighbb5mwqnytmb.netdna-cdn.com/wp-content/uploads/2016/12/ITU-chart-on-mobile-Internet-subscriptions.png> > accessed 26 June 2016

⁶¹ OFCOM, “Review of the Universal Service Obligation“ (2006) <https://www.ofcom.org.uk/_data/assets/pdf_file/0021/34266/statement.pdf> accessed 26 June 2017

quality standards. It is interesting to know that the market is intended to be the one who achieves this goal with private sector resources and only in those places where the market fails Provide such data service, then public resources would be allocated.⁶²

Nowadays, in the UK it is considered obligatory to have a broadband universal service. A Public consultation was already submitted with a very wide range of views, still to be analysed all the issues that could help to develop that project such as affordability, cost, universal service provider or providers and market distortion, this will determinate among with studies the viability of the project.⁶³

6.3 Universal services policies in Mexico

The projects tackled during the first decade of the 21st century was for rural and less developed populations, some of those projects consisted of having a Rural Telephony Program and a Public Housing Program, seeking to provide them with the first telephone set and without monthly rent, with prepaid calling cards and internet access, this obligation was imposed to the historic operator Telmex when the company applied for a modification of the concession title.⁶⁴

The creation of the Telecommunication Social Coverage Fund from a budget allocation of the Chamber of Deputies in 2002 included a section of social coverage to serve the universal service in the LFT.⁶⁵ This provided the SCT with the power to develop social and rural coverage programs for any concessionaire to carry out. With the Federal budget for 2002, the Social Telecommunications Coverage Fund was created.

In Mexico, the universal service was covered under the term of social coverage, inside of the LFT. With the eventual issues of a convergent telecommunications law as mandated by the Reform, universal service in Mexico may enter in a new stage. Actions for the strengthening of broadband, information, communication technologies and the issuance of the National Digital Strategy⁶⁶ are as a complement to these actions.

⁶²OCDE, “Rethinking Universal Service for a Next Generation Network Environment” (2006) <<http://www.oecd.org/internet/broadband/36503873.pdf>> accessed 26 June 2017

⁶³Ofcom “Designing the broadband universal service obligation” (2016) <https://www.ofcom.org.uk/_data/assets/pdf_file/0025/68335/summary_of_responses.pdf> accessed 26 June 2017

⁶⁴ Clara Luz Álvarez González de Castilla, “*Derecho De Las Telecomunicaciones*” (UNAM 2012) pg.277-278

⁶⁵ Ley Federal en materia de Telecomunicaciones y Radiodifusión (last amendment published at the Official Journal of the Federation, 27 January 2017)

⁶⁶ Gobierno de la República Mexicana, “National Digital Strategy” (2016) <<http://www.gob.mx/mexicodigital>> accessed 26 June 2017

Some programs have been implemented that aim to reduce the infrastructure and access gap, such as the National Broadband Impulse Network and the support program for Broadband Social Connectivity. Another program purpose is to reduce the access gap such as the National Network of Education and Research that connects universities and research centres in the Mexico with the international academic network Internet. The National Network of Education and Research is coordinated by the University Corporation for the Development of the Internet, there is also the program *CompuApoyo* that provides money for the acquisition of a computer and grants credit to contract the internet service.⁶⁷

⁶⁷ Ibid.

7. PRIVACY AND ELECTRONIC COMMUNICATIONS

7.1 Regulatory provisions

The directive articles are provided to protect and strengthen users' rights, thinking straightforward considering the technological evolution and the booming of the Internet with the use and exploitation of the data, which make it essential to update the framework. The value of personal data has raised and it is extremely appreciated by the companies, as well the EU recognizes and respect the rights of the users and the protection of them.⁶⁸

The Personal Data Directive is the Directive intended to set, how the public communications networks should specify a legal, regulatory and technical provision to protect fundamental rights and freedoms of natural persons and legitimate interests of legal persons. The EC has made efforts to promote competition in telecoms and generate lower prices while they try to empower consumer protection.⁶⁹

It is addressed by the Directive issues such as confidentiality of communications (to prevent unauthorised access to communications); Retention of data for public security investigations (which must be necessary, proportionate and appropriate for a democratic society); The sending of unsolicited electronic messages (known as spam) except when there is previous consent (opt-in system); The installation / use of cookies; The prior consent for the telephone number, e-mail address and postal address to be included in the directories or public guides of electronic communications users.⁷⁰

There are two new rights given to EU citizens by the new regulation that are intended to facilitate the users to move their data between different companies or services, and the right to be forgotten to protect the misuse and inaccurate of personal data.

⁶⁸ Nikolas Ott, Hugo Zylberberg, "A European Perspective on the Protection of Personal Data in Cyberspace" (Kennedy School Review, 14 September 2016) < <http://harvardkennedyschoolreview.com/a-european-perspective-on-the-protection-of-personal-data-in-cyberspace/> > accessed 26 June 2017

⁶⁹ Luca Schiavoni, Ovum Report "Changes compared to the Data Protection Directive and potential impact" (2016) <<https://www.ovumkc.com/Products/Service-Provider/Regulation/The-EU-s-General-Data-Protection-Regulation/Summary>> accessed 26 June 2017

⁷⁰ Directive 2002/58/EC of the European Parliament and of the Council of 12 July 2002 concerning the processing of personal data and the protection of privacy in the electronic communications sector (Directive on privacy and electronic communications)[2002] OJ L 201/37

- Right of data portability: The new GDPR objectives are to strengthen consumers control over their personal data and to eliminate the burdens to change among services or companies, allowing the portability.
- The right to be forgotten: This right was not mentioned in the Directive, however, in May 2014, the ECJ ruled regarding a case in Spain involving a dispute between a private individual and Google that there is a right to get your data erased when the information is not accurate and is considered to damage the personal reputation.⁷¹

On 4 May 2016, the new Regulation and the Directive in Data Protection have been published in the EU. Only until the 25 May 2018 must be enforced in the national law of every Member State. The objective of this new regulation is to strengthen citizens' fundamental rights, and facilitate business by simplifying rules for undertakings in the EU Digital Single Market.⁷²

7.2 Spanish Policies

During 1999 the first law for Data Protection was issued in Spain in order to intend to guarantee and protect, in matters of the processing of personal data, public freedoms and fundamental rights of natural persons, and especially their honour, privacy and personal and family privacy.⁷³

After the publication of the Directive, this regulation has been deeply adopted and applied to strengthening the law with diverse reforms, resolutions and internal regulation. The Constitutional Court of Spain, declared the right to data protection as fundamental right, autonomous and clearly distinguished from the other, to grant individuals with powers for controlling all their personal data on their use and destination, to prevent their illegal use and trafficking in a manner that could be detrimental to the dignity.⁷⁴

⁷¹ Luca Schiavoni, Ovum TMT Intelligence “Report: Changes compared to the Data Protection Directive and potential impact” (2016) <<https://www.ovumkc.com/Products/Service-Provider/Regulation/The-EU-s-General-Data-Protection-Regulation/Summary>> accessed 26 June 2017

⁷² European Commission, “Reform of EU data protection rules” [2016] <http://ec.europa.eu/justice/data-protection/reform/index_en.htm> accessed 26 June 2017

⁷³ Ley Orgánica 15/1999, de 13 de diciembre, de Protección de Datos de Carácter Personal (1999) BOE-A-1999-23750

⁷⁴ Spanish Data Protection Agency “Regulation of data protection in 12 questions” (2016) <http://www.agpd.es/portaleswebAGPD/revista_prensa/revista_prensa/2016/notas_prensa/news/2016_05_26-ides-idphp.php> accessed 26 June 2017

Spain adopted a new system that will be implemented on 2018, which collect all the purposes of the Directives attached to his internal regulation and adopt six obligations or principles⁷⁵ that the users can identify to be protected his information and treated properly, such as:

- a) **Principle of quality:** establish that all the Personal data must be treated in a lawful, fair and clear. It is not necessary to deliver more personal data than is strictly necessary.
- b) **Principle of information:** When someone collect your personal data, should inform you about the treatment of personal data, the purpose for which your personal data are collected, who are the recipients of the collection of your personal data, where you can exercise your rights of access, rectification, cancellation and opposition, and the identity of who collects your personal data.
- c) **Principle of legitimating of data processing:** must be necessary legitimate the acceptance or refusal of services, without your consent; you cannot be discharged from any service. If you have not consented or revoked the consent to not receive e-mails, in case of receiving them, those who send them may incur a violation of data protection regulations.
- d) **Safety principle:** All the responsible persons who collects and treats your personal data must adopt a series of Security measures, technical and organizational to protect your data.
- e) **Principle of transfer of personal data:** All your personal data can only be transferred to third parties if previously you have been asked for your consent.
- f) **Principle of treatment of specially protected data:** All information that contains or expresses your ideology, union affiliation and beliefs, which refer to racial origin, health and sexual life, which refer to the commission of criminal or administrative offenses.⁷⁶

7.3 Mexican policies

The Directive of the EU has a strong character and demonstrate the importance to regulate in data protection, so after a few years Mexico took in consideration the EU Directive as model

⁷⁵ Spanish Data Protection Agency “ Protección de Datos: Guía para el Ciudadano“ (2017) <https://www.agpd.es/portalwebAGPD/canaldocumentacion/publicaciones/common/Guias/GUIA_CIUDADANO.pdf> accessed 26 June 2017

⁷⁶ Ibid.

of best practices in the data protection reforms and considered some characteristics for the new laws that have been approved.

There is a recent law for protection of personal data from 2017, which gives people control over the treatment by third parties of information about themselves, which is closely linked with human dignity and free development of personality. The new law establishes the bases, principles and procedures to guarantee the right that every person has to have the protection of their personal data, in the possession of obligated subjects in matters such as:

- minimum bases for processing personal data and the rights of access, rectification, and others, through simple procedures,
- protect personal data in the possession of any subject obliged that handle personal data, any authority, entity, organ and body of the Executive, Legislative and Judicial Branches,
- guarantee that everyone can exercise the right to the protection of personal data,
- Endorse and spread a culture of personal data protection.⁷⁷

As well, the Public Registry of Telephone Numbers was established to avoid advertising in which users of fixed and mobile telephony can register their number to not receive calls. The call centres, businesses and advertising agencies are required to review the lists of the numbers that have been registered to not receive calls.

⁷⁷ Ley General de Protección de Datos Personales en posesión de sujetos obligados (New law published in the Official Journal of the Federation, 26 January 2017)

8. PROPOSAL FOR A DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL ESTABLISHING THE EUROPEAN ELECTRONIC COMMUNICATIONS CODE

The EU is working to strengthen the digital single market in order to modernise the telecoms regulatory environment to face the new technological and market challenges. Diverse areas should be reviewed like audio visual media services, platforms and intermediaries and trust and security.⁷⁸

The previous actions taken by the EU has led to greater choice for the consumer, falling call costs, and higher standards of service, some of the most important are:

- A solid framework for electronic communications, that encourage competition and promote consumer rights;
- encouraging the development in broadband networks supporting high-speed Internet through investment;
- Promoting wireless technologies, through the radio spectrum policy programme;
- Establishing the elimination of roaming within the EU to protect mobile users from high charges inside of the DSM and promoting the development of a single market;
- Participating and leading international discussions on development and governance of the internet.⁷⁹

On September 14, 2016, the EC published detailed proposals to reform the EU's telecoms rules, however the most remarkable item in the proposal is the Electronic Communications Code.⁸⁰

The EC is attempting to show that the regulation that is implemented within the EU apply not only to the traditional telecommunications, but also to all the new players in the field like the Over the Top services that provides similar or identical services (Facebook, WhatsApp, Google, and others), trying to balance the services in similar conditions applying similar rules.⁸¹

⁷⁸ EC Digital Single Market, “What next for EU telecom rules?” (Digital Single Market BLOG POST 2015) <<https://ec.europa.eu/digital-single-market/en/blog/what-next-eu-telecom-rules>> accessed 26 June 2017

⁷⁹ European Commission “Digital Single Market - Telecom Laws” (2015) <<https://ec.europa.eu/digital-single-market/en/policies/telecom-laws>> accessed 26 June 2017

⁸⁰ Commission, “Proposal for a Directive of the European Parliament and of the Council establishing the European Electronic Communications Code (Recast)” COM/2016/0590 final - 2016/0288 (COD)

⁸¹ Matthew Howett, Ovum TMT Intelligence “The EC plans to overhaul regulatory framework with a new Electronic Communications Code” <<https://www.ovumkc.com/Products/Service-Provider/Regulation/The-EC-plans-to-overhaul-regulatory-framework-with-a-new-Electronic-Communications-Code/Ovum-view>> accessed 26 June 2017

The demand for a high-quality fixed and wireless connectivity is imminent in a convergent market where the trend is to digital and cloud services, the Internet of Things, Machine-to-Machine communication and the development of the networks.

The CODEX is aims to bring benefits to the users, industry and the market in general, through this instrument some benefits can be achieved such as:

- a) **Clear and inclusive rules:** a new set of EU ruling that will be the same all over the Union with encouraging the single market generating benefits for the consumers that will enjoy a greater level of protection and better quality of services in affordable prices.
- b) **Better quality:** fostering competition for investments, traduce in higher connection speeds, better quality and higher coverage; the new regulations is designed in order to adapt and evolve with the technology (mobile systems, new networks, new services and Wi-Fi users);
- c) **Better prices:** by multiplying the offers available and bringing more capacity, we expect unit prices to go down;
- d) **More services:** all the new developments, apps, and evolution of technologies are generating a new environment and a new wave of services; the Code proposes a light regulatory approach which allows all actors, essentially from the usual telecom operators to online players.⁸²

The proposal includes a provision to reinforce the national regulators to establish a standard set of rules that could be predictable and the same rules throughout the Digital Single Market. Another important proposal is an initiative helping European communities to increase the penetrations and offer free Wi-Fi hotspots to their citizens.⁸³

Issuing a policy to be adopted within a huge market as the EU with more than 500 million of inhabitants⁸⁴, might increase the participations of the users, provide better services in optimal conditions, promoting the internal market and the commerce, increasing the revenue of the

⁸² Commission, “Proposal for a Directive of the European Parliament and of the Council establishing the European Electronic Communications Code (Recast)” COM/2016/0590 final - 2016/0288 (COD)

⁸³ European Commission “Digital Single Market - Telecom Laws” (2015) <<https://ec.europa.eu/digital-single-market/en/policies/telecom-laws>> accessed 26 June 2017

⁸⁴ European Union “Living in the EU” (2017) <https://europa.eu/european-union/about-eu/figures/living_en> accessed 26 June 2017

markets, all this assumption is related with the prospective that is generated looking for the 2021, assuming a huge development and a strong internal market with high penetration.⁸⁵

Some of the hardest challenges to achieve the DSM and the objectives of the Codex is the harmonization of frequencies among all the MS, the different quality standards that every Member State set for their services, that should be standardized and the implementation of the CODEX in every local law.

It is necessary to wait for the implementation of the new Directive to establish a new panorama of simplification, allowing all the users and undertakings participate under the same conditions within the union, and to review the policies and results to evaluate the benefits achieved and the future proposals with the future development.

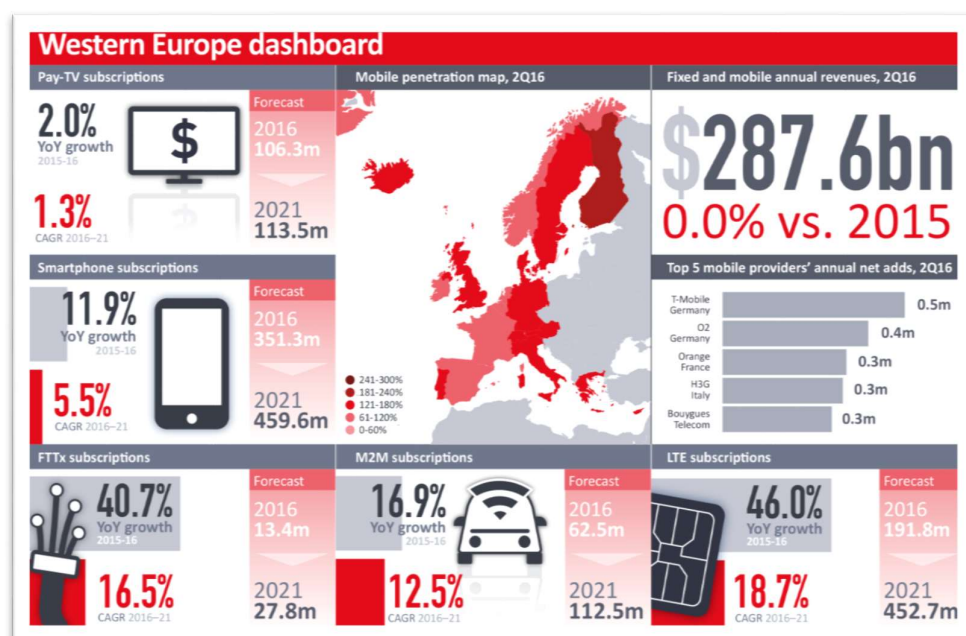


Fig. 5 Western Europe chart of the regional context⁸⁶

⁸⁵ Armita Satari, OVUM TMT Intelligence “ Germany Update, December 2016“ TE0014-000432 (2016) <<https://www.ovumkc.com/Products/Service-Provider/Europe/Germany-Update.-December-2016/Summary>> accessed 26 June 2017

⁸⁶ Armita Satari, OVUM TMT Intelligence “ Germany Update, December 2016“ TE0014-000432 (2016) <<https://www.ovumkc.com/Products/Service-Provider/Europe/Germany-Update.-December-2016/Summary>> accessed 26 June 2017

9. CONCLUSION

The ICT's have evolved and became a fundamental part of human beings in the contemporary world. The inclusion of ICT in everyday life has been infinitely more rapid than research on the implications for the environment and the health of human beings.

Some historical changes and the evolution of the electronic communications have shown that the regulatory framework of the telecommunications is a very dynamic field. There always are technical developments or new technologies invented that improve the telecommunications market and, therefore, it is necessary to adapt and follow the path of these developments. Most of the new tendencies result from previous experiences or failures to regulate. To provide an example, the VoIP (voice over internet protocol), that previously was considered illegal, because it was used to avoid the interconnection fees for traditional landlines or telephone services, now is considered as an improvement and is used on a daily basis by our phones.

Mexico has closely followed the practices of the EU, in regard to development of the market and protection of consumers, users and undertakings. However, there are certain differences in the policy making in those countries. The decisions of Mexico are based on policies oriented to the development, easier access and growth of the State, while the EU focuses on the development of the Internal Market, trying to set equal conditions for every Member State. On the other hand, in the telecommunications market globally there are tendencies to apply the same principles to establish the environment that provides more services, higher quality standards, major access, penetration, interoperability and convergence for other services that are changing to an electronic transmission. In brief, granting the permissions for the creation of diverse services could be implemented due to the application of all the principles and directives.

The regulation is important to establish conditions, guidelines and policies that every State is aiming to achieve and to implement for the development of their nations. When an objective and complete analysis of the market situation are not carried out, a harmful regulation can be issued.

So far, to regulate efficiently, the EU and Mexico chose a policy to deregulate the telecommunications market. It is necessary to understand that EU Directives have been a role model to many regulations including Mexico, where those functions and best practices were used and implemented in law to add new attributions to the regulatory authority. Nevertheless,

the EU Member States have been changing their regulations in a progressive way according to such Directives.

The Mexican new framework is known as a strong new regulation, where the regulator has made a decision to strengthen their position as independent regulators, to reduce the administrative burden, to provide a competitive and secure panorama for investment. Those changes are based on the Framework Directive and on successful examples of application of this Directive in countries like Austria, the UK or Germany.

New trends are adopted to establish new independent and strong authorities, who have the obligation to incentivize the participation in the market for the undertakings generating confidence about the independence of decisions, the power of the authority to resolve situations, the transparency of every act. Mexico also adopted such characteristics that strengthen his power and his transparency.

About the Access Directive, the EU and Mexico share a lot of the attributions disaggregation, wholesale prices, interoperability, interconnection and even dispute resolution that were given by the recent reform, although in the EU already was implemented a few years ago. To Mexico take a while to put in practice the international trends, while in Europe is obligatory to implement right away in the period of grace that is established.

Convergence is the new evolution in technology as well in the authorization field, Mexico adopted a similar system as the Authorization Directive. The frequency bands are granted in different acts in order to protect the scarce resource according to the national policies and their classifications, but the convergent licenses are granted only by the fulfilment of some requirements stated in law, in Mexico and most of the countries in the EU the local and foreign investment are encouraged to promote development. Some EU Member States have adopted a successful system of notification as well, where the new companies in telecommunications start developing the business and the structure, they have to notify the regulator to register as a company that will provide the services and will fulfil all the national requirements prior begin operations, in contrast with Mexico that is required first to obtain the license or authorization.

Speaking about Universal Service we can mention diverse differences attained that the definition and objectives adopted by each country are oriented to the policies that each country set. For the EU Member States, the inclusion of people with disabilities, the telephone access, penetration of broadband and the support to develop the internal market is a need that is

summarized in the Universal Service Directive. In other hand, other group of countries as Mexico take those principles and add a few important tasks like the mobile coverage in less developed populations, public and universal access to internet for all, those actions are oriented to increase the participation of the country in the digital economy and promoting development.

The EU Directives provide the most advanced practices for privacy and data protection. However, in the other countries, in Mexico in particular, the protection of the rights has just started. Even though the new law was adopted, there are obstacles to apply it due to its unclear character. Spain, for example, has leading data protection policies. Before implementing the newest regulation, Spanish authorities have already informed the population about the changes and took affirmative measures to empower them and to teach about their rights. Mexico has not yet reached the same level of data and privacy protection, and it might take some time to achieve this kind of protection and to implement right to privacy.

A huge step forwards for the European Union in their attempts to create a strong Internal Market, was to propose a common European Electronic Communications Code. It could be considered as the first step to create an environment for equal application of the interconnection principles, better quality of services with lower prices. The EU will continue to constantly review the regulatory framework applicable to communications and competition, which is based on the best practices of the Member States and could help to avoid the previous mistakes.

For years Mexico had a negative effect of bad legislation and weak regulations on the telecommunications market. However, after the reform Mexico levelled the ground to create a stable telecommunications market with the help of some of the major regulators around the globe and the best practices. The main changes are as follows: responsibility to issue convergent licenses, interconnections decisions, to strengthen significant market power, to give the authorities powers to regulate competition in the telecommunications and broadcasting areas, to allocate spectrum, to protect users, to promote the universal service. These changes led to the reduction of tariffs for the end users, to opening the entrance for new providers of services in the market and they fostered competition on different levels, including the sharing of infrastructure between Mobile virtual network operators.

Nowadays, Mexico can be considered as a developed country. Its regulations are similar to all the international policies and are facing challenges to be implemented as established by the new reform. It is hard to speak about Mexico and not to speak about 120 million of inhabitants, the NAFTA or the exports around the world. Mexico is a big market for all the services and goods

and is considered now to have a good level of competition and transparency in telecommunications and media.

Mexico is taking a right path and is oriented to follow the tendencies set by the national market and the best international practices. Nevertheless, Mexico will continue treating telecommunications as an essential tool to assure human rights, growth in the economy, prosperity of the society, entertainment, security, environmental protection and to counteract climate change, among many other areas that directly affect daily life of nationals.

Nowadays, the affordability of the services and access to them is a priority in telecommunication policies and strategies. The tendencies to deregulate let work with their own inertia of the market, where companies have to play and follow the rules in order to not be sanctioned, promoting their investment instead of creating barriers to participate. That improvement shown the potential achievements reached by the synergies of the market.

The proposal of the CODEX in Mexico led to a strong integration of global policies, guided by different actors but oriented to benefit users and to foster competition among the players and new players in the market. The actions taken by the EU are transforming the perception of the International Market. The successful implementation of new laws within the Union has resulted in providing better access for users to participate in the market and it also boosted innovation and development. As the papers shows, Mexico has implemented the best EU practices concerning telecommunications on a national level. However, the biggest difference between the EU and Mexico is the approach to promotion of access, participation and privacy.

In conclusion, the new policies and trends have promoted new ways to regulate the telecommunications market and helped to facilitate the progress and the penetration in this field not just for first world countries but also for countries in development. The innovation and evolution of technologies brought new challenges to the regulators, since there was a need to keep regulations up-to-date. Beyond the impact of regulations on the conditions of competitiveness in the marker, it had a direct influence on broadening and guaranteeing rights, promoting entrepreneurship and technological development.

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