

QUESTION 10-3/1

THE IMPACT OF THE LICENSING AND AUTHORIZATION REGIME AND OTHER RELEVANT REGULATORY MEASURES ON COMPETITION IN A CONVERGED TELECOMMUNICATION/ICT ENVIRONMENT



CONTACT US

Website: www.itu.int/ITU-D/study_groups

ITU Electronic Bookshop: www.itu.int/pub/D-STG/

e-mail: devsg@itu.int

Telephone: +41 22 730 5999

QUESTION 10-3/1:

The impact of the licensing and authorization regime and other relevant regulatory measures on competition in a converged telecommunication/ICT environment



ITU-D Study Groups

In support of the knowledge sharing and capacity building agenda of the Telecommunication Development Bureau, ITU-D Study Groups support countries in achieving their development goals. By acting as a catalyst by creating, sharing and applying knowledge in ICTs to poverty reduction and economic and social development, ITU-D Study Groups contribute to stimulating the conditions for Member States to utilize knowledge for better achieving their development goals.

Knowledge Platform

Outputs agreed on in the ITU-D Study Groups and related reference material are used as input for the implementation of policies, strategies, projects and special initiatives in the 193 ITU Member States. These activities also serve to strengthen the shared knowledge base of the membership.

Information Exchange & Knowledge Sharing Hub

Sharing of topics of common interest is carried out through face-to-face meetings, e-Forum and remote participation in an atmosphere that encourages open debate and exchange of information.

Information Repository

Reports, Guidelines, Best Practices and Recommendations are developed based on input received for review by members of the Groups. Information is gathered through surveys, contributions and case studies and is made available for easy access by the membership using content management and web publication tools.

Study Group 1

For the period 2010-2014, Study Group 1 was entrusted with the study of nine Questions in the areas of enabling environment, cybersecurity, ICT applications and Internet-related issues. The work focused on national telecommunication policies and strategies which best enable countries to benefit from the impetus of telecommunications/ICTs as an engine of sustainable growth, employment creation and economic, social and cultural development, taking into account matters of priority to developing countries. The work included access policies to telecommunications/ICTs, in particular access by persons with disabilities and with special needs, as well as telecommunication/ICT network security. It also focused on tariff policies and tariff models for next-generation networks, convergence issues, universal access to broadband fixed and mobile services, impact analysis and application of cost and accounting principles, taking into account the results of the studies carried out by ITU-T and ITU-R, and the priorities of developing countries.

This report has been prepared by many experts from different administrations and companies. The mention of specific companies or products does not imply any endorsement or recommendation by ITU.

Table of Contents

	<i>Page</i>
QUESTION 10-3/1	1
1 Statement of the situation	1
1.1 Objectives of the Question	1
1.2 Expected Output of the Study	1
1.3 Methodology	2
2 Overview of Different Legal and Regulatory Frameworks in Competitive Converged Environment	2
2.1 Legal Frameworks on Competition in Selected Countries.....	2
2.1.1 Australia	3
2.1.2 Republic of Korea	3
2.1.3 Tanzania	3
2.2 Regulatory Frameworks on Competition Issues	4
2.2.1 Market Analysis to Determine Relevant Markets.....	4
2.2.2 Defining Dominant Operators.....	4
2.2.3 Market Definition.....	6
3 The Impact of the Licensing and Authorization Regime on Competition in a Converged Environment	8
3.1 The Degree of Competition in the Sector	8
3.2 The Number of Market Players.....	9
3.3 Penetration Rates of ICT Services	10
3.4 Infrastructure Sharing.....	11
3.4.1 Country Experience: People’s Republic of China	11
3.4.2 Country Experience: Ghana	11
3.4.3 Country experience: India.....	12
3.5 Consumer Protection in Competitive Market.....	12
3.5.1 Country Experience: Republic of Korea	13
3.5.2 Country Experience: Mali.....	13
3.5.3 Country Experience: Turkey.....	14
3.6 Effects of Converging Services on the ICT Sector	14
4 Analysis of Regulatory Experiences with Changes and Transition to Convergence	15
5 Evaluation of the Role of Telecom /ICT Regulators and Competition Authorities	16
5.1 The Working Relationship Between National Regulatory Authorities and Competition Authorities	16
5.2 Mergers of telecommunications companies and the Role of Regulatory and Competition Authorities	20

	<i>Page</i>
6 Guidelines and Concluding Remarks	22
6.A Guidelines on Regulatory Measures on Competition in a Converged Telecommunications/ICT Environment	22
6.B Guidelines on Merger of Telecommunication Companies/Licensees	24
6.C Additional Guidelines to be Considered	25
 Annexes	
Annex 1: Composition of Rapporteur and Vice-Rapporteurs	29
Annex 2: References.....	30
 Figures and Tables	
Figure 1: Criteria used in Determining “Dominance”.....	5
Figure 2: Competition in Selected Broadband Services, World, 2012	9
Figure 3: Global ICT Developments and Broadband Penetration, 2008-2013	10
Figure 4: Infrastructure Sharing Regulation, 2012	12
Figure 5: Telecommunication Specific Consumer Protection Law and Regulation, by Region, 2012....	13
Figure 6: Authority in Charge of Telecom related Competition Issues, 2012	17
Figure 7: Legal Instruments Defining Competition, 2012	18
Table 1: Selected Countries with Information on Competition Issues.....	3
Table 2: Anti-competitive Practices and Behaviour	16

QUESTION 10-3/1

The impact of the licensing and authorization regime and other relevant regulatory measures on competition in a converged telecommunication/ICT environment

1 Statement of the situation

At the World Telecommunications Development Conference held in Hyderabad, India in 2010 (WTDC-10) it was decided that the issue of the impact of the licensing and authorization regime and other relevant regulatory measures on competition in a converged telecommunications/ICT environment was of relevancy for all countries, particularly developing countries, and that it should be further studied under a revised Question during the 2010-2014 study period.

1.1 Objectives of the Question

The main objective of Question 10-3/1 is to study the following issues and make recommendations on the same:

- Different legal and regulatory frameworks on competition in a converged environment.
- The impact on competition by licensing and authorization in a converged telecom/ICT environment.
- Analysis of regulatory models to help to deal with the impact of convergence in ICT markets.
- Experiences from member states on aspects of competition within the sector focusing on anti-competitive practices and conduct, determining dominant position in a market and action taken to prohibit mergers and acquisitions which have negative impact on competition.
- The role of national regulatory authorities and competition authorities to deal with mergers of companies that will provide converged services.

1.2 Expected Output of the Study

During the ITU-D study period 2010-2014, the Rapporteur's Group on licensing and authorization examined various issues concerning the impact of the licensing and authorization regime and other relevant regulatory measures on competition in a converged telecommunications/ICT environment. A comprehensive study was made as indicated in this report covering the following:

- a) Legislative frameworks for converged services, identifying main trends;
- b) How national regulatory/competition authorities foster converged services;
- c) Experiences of telecom and competition regulators with changes in authorization and licensing regimes;
- d) The impact these regimes have on competition in a converged environment;
- e) Guidelines for assisting developing countries to introduce new legislation or adapt their licensing framework to facilitate convergence, define and analyse relevant markets for converged services and describe how to identify service providers with significant market power.

1.3 Methodology

The Question was handled within the framework of Study Group 1. Documentary research on the question was carried out from the ITU's database/documents as well as other sources of information and documents relevant to the study from other institutions.

The Rapporteur's Group also carried out analysis on the question using the experience of the ITU member countries and meetings held from 2010-2013 to discuss the relevant documents.

The draft final report and the proposed draft Recommendation(s) were submitted to the ITU Study Group 1 after a four years period, with an interim report and draft final report of the study with proposed Guidelines and/or recommendations for those countries which are planning to introduce new legislation or adapt their existing framework and establish principles to ensure a conducive competitive environment of converging services.

2 Overview of Different Legal and Regulatory Frameworks in Competitive Converged Environment

There is no one definition of convergence. However, convergence has been described as the process in which telecommunications, information technology and broadcasting have merged in such a way that different services can be provided on any of the said platform. Furthermore, convergence has been portrayed by the key principles of technology and service neutrality.¹

In the past decade countries have changed their legal and regulatory frameworks so as to embrace convergence in telecommunications and broadcasting. Together with convergence there have been dynamic changes in the communications sector that have led to opening up of doors to new players, development of new markets and services in a competitive environment.

To accommodate new and more players in a competitive market, as well as having a conducive regulatory framework a number of countries have in place legal and regulatory frameworks that among other issues prohibit anti-competitive practices and conduct, determine the dominant licensee and take action on mergers or acquisitions. The following parts will elaborate on the legal and regulatory frameworks in competitive converged environment.

2.1 Legal Frameworks on Competition in Selected Countries

Competition issues in the communications sector are generally governed by legislation. Examples include:

- specific legislation on competition issues including establishment of bodies responsible for competition in specified issues/sector, appointment of the Board of the competition authority, prohibition of anti-competitive practices and behaviour, dominant operator and remedies for persons aggrieved by anti-competitive action;
- legislation establishing a National Regulatory Authority responsible for communication matters and/ or;
- legislation to cover electronic communication issues; including the licensing functions of the regulatory authority and its role in competition issues such as determining licensees with significant market powers.

¹ ITU-D Study Group 1 Report for Question 10-2/1 on the Regulation for Licensing and Authorization of Converging Services (2006-2010 study period), available at: www.itu.int/pub/D-STG-SG01.10.2-2010

In the ITU World Telecommunication Regulatory Database of 2012, 89 countries have in place legislation governing competition issues². With liberalization of the telecommunications sector in many countries, establishment of regulatory bodies, and new entrants in the market, competition issues are becoming more important. Highlights on the legal frameworks in competitive converged environment in selected countries are provided in the following parts.

2.1.1 Australia

The Australian Competition and Consumer Commission (ACCC) is the competition regulator. The revised Trade Practices Act, 1974 (TPA) was renamed as the Competition and Consumer Act, 2010, and provides the ACCC with a range of powers. These include investigating possible anti-competitive conduct (Part XID-CCA) and enforcement powers after applying for the same to the court for orders such as injunction restraining parties from engaging in anti-competitive behaviour, order to pay damages for contravening conduct, or civil fine. The Australian Competition Tribunal (ACT) is an independent statutory tribunal that conducts hearings on competition issues such as determining applications for merger authorisations and applications for review of an ACCC decision.

2.1.2 Republic of Korea

The Monopoly Regulation and Fair Trade Act³ provides for substantive standards for anti-competitive business combinations and requirements in the Republic of Korea. The Korea Fair Trade Commission (KFTC) an administrative body under the Prime Minister's Office, is responsible for promoting competition, strengthening consumers' rights, creating a competitive environment for small and medium sized companies and restraining concentration of economic power.⁴

2.1.3 Tanzania

Competition issues in the communications sector in Tanzania are governed by three laws: the Fair Competition Act (FCA) 2003, the Tanzania Communications Regulatory Authority Act (TCRA) 2003 and the Electronic and Postal Communications Act (EPOCA) 2010. The TCRA Act requires the Authority, when carrying out its functions and exercising its powers, to take into account whether conditions for effective competition exist in the Market, any of its exercise is likely to lessen competition or add costs in the market to the detriment of the public, and whether any detriment to the public outweigh the benefits.

The Fair Competition Act (FCA) is a general competition law. It obliges the Fair Competition Commission to request written advice from the Authority when it encounters any matter related to electronic and postal communications. The Electronic and Postal Communications Act, 2010 (EPOCA) contains provisions elaborating on issues of competition.

The following table indicates selected countries with legislation on competition issues and the responsible bodies:

² ITU-D Study Group 1 Rapporteur Group for Q10-3/1 document [RGQ10-3/1/22](#) (BDT), 28 February 2013.

³ Law 3320 of 31 December 1980.

⁴ Competition Volume 1 – Practical Law Company, 2011, see: www.practicallaw.com/competitionhandbook and <http://eng.ftc.go.kr>

Table 1: Selected Countries with Information on Competition Issues

S./No.	Country	Legislation(s) on competition	Name of body responsible for competition issues
1	Australia	Competition and Consumer Act, 2010	Australian Competition and Consumer Commission
2	Canada	The Competition Act	Competition Bureau
3	India	The Competition Act	Competition Commission of India
4	Senegal	Prices, Competition and Economic Disputes Act	Competition Commission
5	Sweden	Competition Act	Swedish Competition Authority
6	Republic of Korea	Monopoly Regulation and fair Trade Act	Korea Fair Trade Commission
7	South Africa	The Competition Act	The Competition Commission
8	Turkey	The Law on protection of competition No. 4054	The Competition Authority
9	Tanzania	Fair Competition Act Electronic and Postal Communications Act	The Fair Competition Commission and TCRA
10	United States	The Clayton Law The Communications Act	Department of Justice Antitrust Division Federal Communications Commission & Federal Trade Commission

Source: Compiled by the Rapporteur from various sources.

2.2 Regulatory Frameworks on Competition Issues

2.2.1 Market Analysis to Determine Relevant Markets

In order to determine relevant markets, it is important to carry out market analysis. A number of regulatory authorities have carried out studies to determine relevant markets in the communications sector and thereafter determine which operators are dominant operators.

2.2.2 Defining Dominant Operators

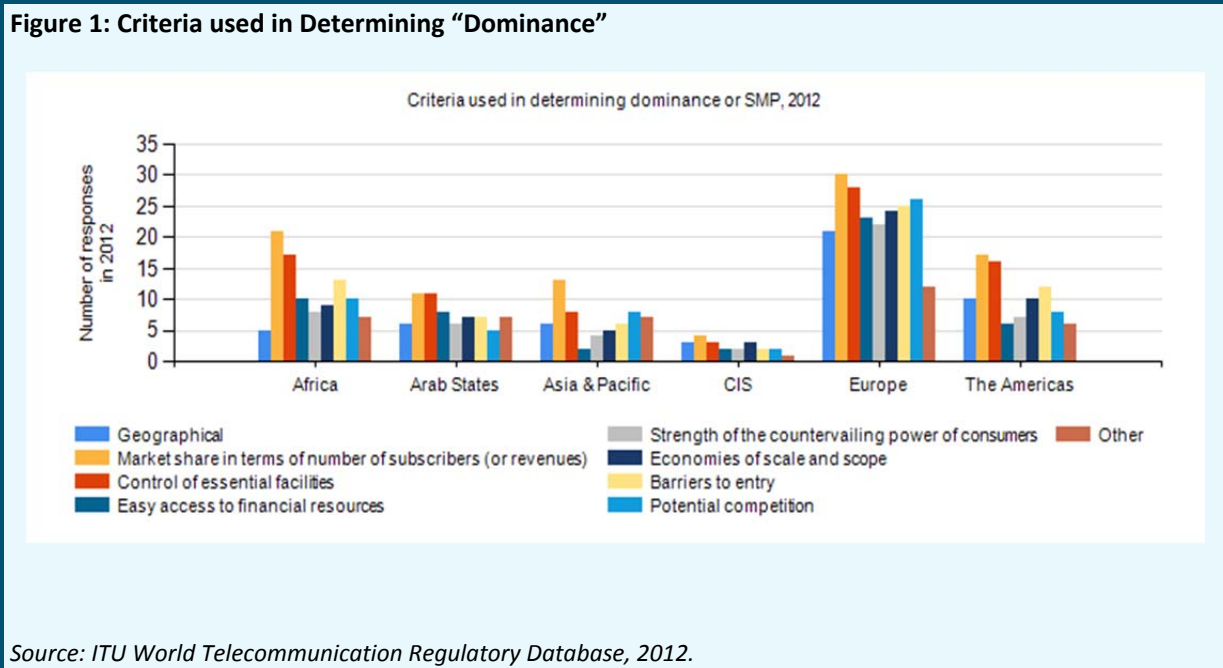
Countries have defined the term “dominant operator” or “dominant licensee” in different ways. In the ITU World Telecommunication Regulatory database reports for 2012⁵, from the responses submitted by Member States the criteria used in determining “dominance” varied in terms of:

- geographical coverage,
- market share in terms of subscribers (or revenues) for type of market,

⁵ ITU-D Study Group 1 Rapporteur Group for Q10-3/1 document [RGQ10-3/1/12](#) (BDT), “ITU World Telecommunication Regulatory Database Reports” updated in 2012, 12 April 2012.

- control of essential facilities allowing access to the end user,
- easy access to financial resources,
- the strength of the countervailing power of consumers, economies of scale and scope,
- barrier to entry and potential competition

Globally, the most frequently used criteria in determining Significant Market Power (SMP) in 2012 remained the market share of the operator in a given market in terms of the number of subscribers or revenues, followed by the control of essential facilities allowing access to the end user and barriers to entry. (See Figure 1 below):



Prior to determining operators with market power, a number of NRAs have first carried out studies to define markets in the relevant sector. Determining whether an operator has market power is of great importance to NRAs who are issuing licences in competitive converged market. In some countries NRAs have powers to determine dominant operators in their jurisdiction. The interpretation of the word “dominant operator” varies between different jurisdictions, but there are two key issues that need to be noted:

- There should be a high market share of a dominant operator, usually more than 35% but also more than 50% of a relevant market; and
- significant barriers to entry in the relevant market where dominant licensee is operating.

In some countries the NRA has powers to determine dominant licensee in the relevant electronic communications market and publish all electronic communication markets and dominant licensees. NRAs have carried out studies to assess competition in the telecom markets in their jurisdictions to identify operators with significant market power⁶. Those determined by the NRA to be dominant licensee are

⁶ In Tanzania, nine relevant telecom markets were identified and published indicating four retail and five wholesale telecom markets (See ITU-D Study Group 1 Rapporteur Group for Q10-3/1 document [RGQ10-3/1/13](#) (Tanzania), 24 February 2012.

prohibited from taking advantage of their market power to eliminate, prevent or deter other licensees from competing in the market.

In some countries like **Tanzania** the term "dominant licensee" is a licensee who has been determined by the Authority to have more than 35% of the electronic communication or postal services market.⁷

In other countries such as **Senegal** an operator is deemed to be in a dominant position if it holds more than a 25 per cent share in the telecommunication market.⁸ Account may also be taken of the operator's turnover with respect to the size of the market, its control of end-user access facilities, and its experience in the provision of telecommunication products and services.

In place of the concept of "operator in a dominant position", the **West African Economic and Monetary Union (WAEMU)** has established the concept of "powerful operator". According to Article 1 of Directive 03/2006/CM/UEMOA/CM/UEMOA relating to the interconnection of telecommunication networks and services, "a public telecommunication network operator may be deemed powerful within the market for a service or group of services if it holds at least 25 per cent of that market's volume. Account may also be taken of:

- the operator's ability to influence market conditions;
- its turnover with respect to the size of the market;
- the control it exercises over end-user access facilities;
- its experience in the provision of services within the market.

The Economic Community of West African States (ECOWAS) uses the concept of "operator having significant market power". Article 1 of Supplementary Act A/SA.2/01/07 on access and interconnection for ICT sector networks and services, describes such an operator as "a company which, either on its own or in conjunction with other companies, holds a position equivalent to a dominant position: that is, a company which has a significant capacity to act in a manner independent of its competitors, its customers and ultimately consumers".

From an analysis of these definitions, it is clear that the criteria used to identify an operator in a dominant position, a powerful operator or an operator having significant market power are the same. The **Nigeria Communications Commission** sets out annual guidelines for identifying operators in a dominant position. In accordance with Part III of the Telecommunications Networks Interconnection Regulations operators deemed to be in a dominant position have a number of obligations to meet including the requirement to provide essential facilities to competing operators⁹.

2.2.3 Market Definition

In a number of countries an operator in a dominant position is identified with reference to its position in a market. In its 2000 report, the French Competition Authority defined the market as follows: "The market, as understood under competition law, is defined as the place in which the supply and the demand for a given product or service come together". Where products or services are substitutable, the market can be described as relevant.

Directive 2002/21/EC (the "Framework Directive") provides that the European Commission shall formulate recommendations and guidelines on market analysis. The analysis procedure comprises three stages, including definition of the relevant market. The boundaries of that market are defined on the basis

⁷ Section 3-EPOCA.

⁸ Article 3-Telecommunications Code.

⁹ www.ncc.gov.ng/legal/regulations.html

of the "substitutability" criteria in regard to demand and supply. These criteria serve to distinguish the product market from the geographical market.

The product market comprises all of the products and/or services considered by the consumer to be interchangeable or substitutable by reason of their characteristics, their price and the use for which they are intended. The geographic market comprises the territory within which the companies concerned compete in the supply and demand of the products or services in question, within which the competitive conditions are sufficiently homogeneous, and which can be divided into neighboring geographic areas characterized, in particular, by differing competitive conditions.

In **Senegal**, the new Telecommunication Code imposes certain obligations on the operator having significant market power. Article 14 of the new code stipulates that "operators deemed to have significant power in a relevant telecommunication sector market shall, in regard to interconnection and access, be required to:

- 1) make information concerning interconnection or access publicly available, and in particular publish a detailed technical and tariff offer in respect of interconnection or access, to be known as an interconnection catalogue. The interconnection offer may be modified during the period of validity of a catalogue subject to all operators being able to derive equal benefit from the modification. Any such modification shall, however, be subject to prior approval by the Regulatory Authority. The Regulatory Authority may, at any time, require that the interconnection catalogue be modified if it considers that the telecommunication network and service competition and interoperability conditions are not guaranteed. It may also decide to add or delete services to or from the catalogue for the purpose of implementing the principles of cost orientation for interconnection tariffs or of better satisfying the needs of the telecommunication service operator and supplier community;
- 2) provide interconnection or access services under non-discriminatory conditions;
- 3) accede to reasonable requests for access to network elements or to facilities associated therewith;
- 4) charge tariffs that reflect relevant costs;
- 5) identify in the accounts certain activities pertaining to interconnection or access, or keep accounting records of services and activities that allow for verification of compliance with the obligations imposed under this article; compliance with these provisions shall be verified, at the operator's expense, by an independent body appointed by the Regulatory Authority."

The new Telecommunication Code also provides for control of the retail tariffs charged by the operator having significant market power, stating in Article 15 that operators deemed to have significant influence in a retail market within the telecommunication sector may have one or more of the following obligations imposed on it by the Regulatory Authority:

- 1) to provide retail services under non-discriminatory conditions and without any abusive coupling of such services;
- 2) to charge tariffs reflecting relevant costs;
- 3) to abide by a multi-year tariff framework defined by the Telecommunication Regulatory Authority;
- 4) to inform the Regulatory Authority of its tariffs prior to their introduction, insofar as those tariffs are not controlled; the authority may oppose the introduction of a tariff of which it is informed pursuant to this sub-paragraph by a reasoned decision detailing the analyses, particularly economic, underlying its opposition;
- 5) to keep accounting records of the services and activities that allow for verification of compliance with the obligations imposed under this article; compliance with these provisions shall be verified, at the operator's expense, by an independent body appointed by the Regulatory Authority.

In **Tanzania**, the Authority is not later than 31st December of each year to publish in the Government Gazette a list of all electronic communication markets that will or are likely to exist and electronic communication licensees determined by the Authority to hold for each electronic communications market a dominant position.¹⁰ In accordance with this requirement, in December, 2011 the Authority, basing its decision upon a consultancy carried out on its behalf on assessment of competition in the telecommunication market issued a list of nine telecom markets and licensees identified to have Significant Market Powers (SMP).

From the said assessment of competition carried out in Tanzania, the Authority is better placed to correct anomalies in areas where there is market failure and issue directions to licensees with SMP to provide among other issues to other licensees access on fair and non-discriminatory terms and conditions.

3 The Impact of the Licensing and Authorization Regime on Competition in a Converged Environment

Regulatory system reforms towards convergence around the world have had great impact on diverse aspects of telecommunications regulation e.g. on service licensing and the rights and obligations of providers, including interconnection, numbering, universal service and spectrum use. Simplification of licences and reduction or elimination of the administrative or formal requirements to enter the market certainly encourages entrance of several players in the ICT market, thereby intensifying competition.

There are some areas where the convergence regulation has had intense and diverse impact. Regulation in these areas is itself affected by technological development in three different ways. First, new technologies lead to the development of new services and modes of delivery unforeseen by existing regulation (e.g. use of IP telephony). Secondly, new technologies affect the overall market structure and the level of competition by changing conditions for supply, which again affect the need for regulation (e.g. the use of cable broadcasting networks for the provision of Internet access). Thirdly, new technological opportunities create demand for new types of services, which again affect the overall market structure, paving the way for new market players. (e.g. introduction of mobile services and the World Wide Web).¹¹

3.1 The Degree of Competition in the Sector

In a competitive market two or more companies may supply the same or substitutable goods or services to the persons in the same relevant geographic market; or acquire the same or substitutable goods or services from the persons in the same relevant geographic market.

Technological convergence tends to create new markets and numerous specific competition issues such as increase in market power and barriers to entry into new markets. The ITU World Telecommunication Regulatory Database shows that the degree of competition in the telecom/ICT sector has increased, with mobile and internet services leading in terms of more players¹². In some countries with a converged licensing framework in place with different market segments ranging from international, national, regional and district level more players have come aboard offering new services to consumers¹³.

¹⁰ Section 62(1) of EPOCA.

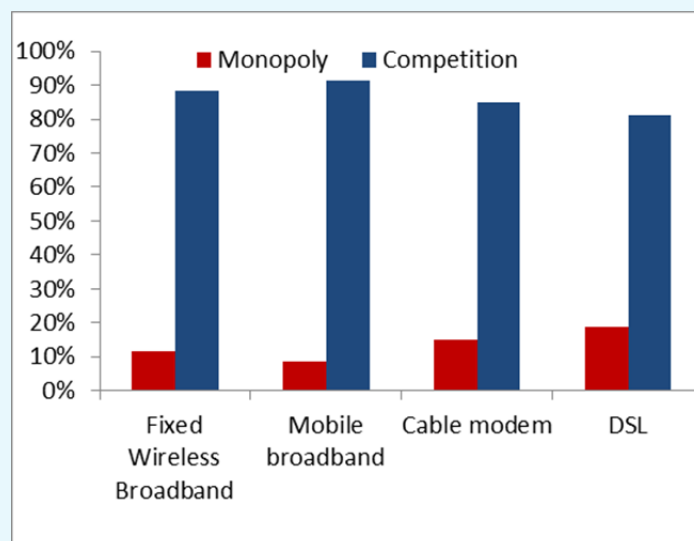
¹¹ www.ictregulationtoolkit.org Module 7: New Technologies and Impacts on Regulation.

¹² See www.itu.int/ITU-D/icteye/Reporting

¹³ ITU-D Study Group 1 Rapporteur Group for Q10-3/1 document [RGQ10-3/1/INF/1](#) (Tanzania) , 5 April 2011. As at 31 December 2011, under the Converged Licensing Framework, the Tanzania Communications Regulatory Authority (TCRA) had licensed a number of licensees in the following categories: 21 as Network Facilities licensees, 16 as Network Services licensees , 80 as Application Services licensees and 133as Content Services licensees.

The development of competition is progressing healthily in all market segments, with broadband markets competitive, at least legally, in a vast majority of countries (see Figure 2).

Figure 2: Competition in Selected Broadband Services, World, 2012



Source: ITU Telecommunications/ICT Regulatory Database.

3.2 The Number of Market Players

Converged regulation affects not only the number of operators providing different telecommunication, broadcasting and IT services but also their organizational structure due to horizontal or vertical integration, mergers, acquisition, and diversification.

Horizontal integration¹⁴: Horizontal integration involves convergence between two or more of the four different branches of the infocom sector: IT, telecom, broadcast and other media. Both service and network innovations have caused a blurring of the boundaries of the telecom sector. A wide range of new telecom service products have been created. At the same time digitalization and expansion of network capacities enables transmission of IT, telecom and broadcasting services on the same networks (network convergence).

Vertical separation¹⁵: Digitalization of both networks and services has made it easier to separate network and service provision. This enables the development of a market structure with a vertical separation of network operators and service providers. New business models focusing on the provision of a particular service or network component are developed as alternatives to the end to end concept, where all service components are provided by the same operator.

The horizontal integration and vertical separation affect the boundaries of the telecom market and redefine the boundaries of the sub-sectors within the ICT area. Furthermore, the impact of these implications depends on both capacities and cost profiles for the various ICT infrastructures.

¹⁴ www.ictregulationtoolkit.org Module 7: New Technologies and Impacts on Regulation.

¹⁵ www.ictregulationtoolkit.org Module 7: New Technologies and Impacts on Regulation.

3.3 Penetration Rates of ICT Services

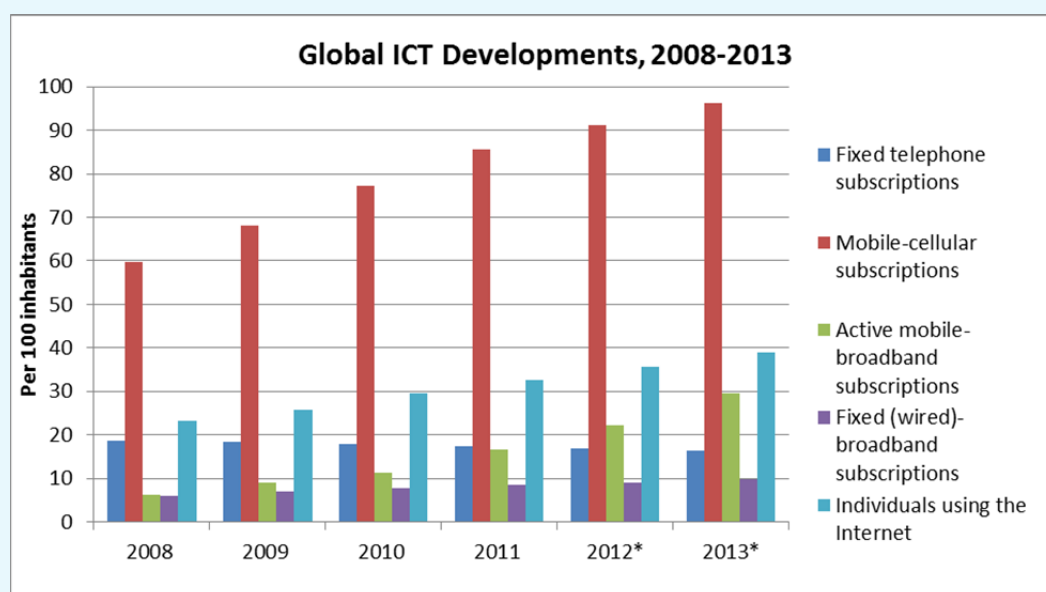
Converging services have important influences on the ICT sector. New services are launched and new operators enter the sector. This affects incumbents and other players in the market, especially their subscriber numbers and revenues. Technological convergence tends to bring new markets and numerous specific competition issues such as increase in the market power and barrier to entry into the new markets.

Looking at the big picture, ITU estimates that by end of 2013, the number of fixed-broadband subscriptions will increase to more than 688 million, corresponding to a global penetration rate of 9.8 per cent. At the same time, the number of active mobile-broadband subscriptions will grow by 21 per cent between 2010 and 2013, to an estimated 2.1 billion by end of 2013; representing nearly three times the number of fixed-broadband subscriptions, but still much fewer than mobile cellular subscriptions, which will reach an estimated 6.84 billion¹⁶.

ITU estimates show that mobile broadband penetration in the developing world reached 20 per cent while penetration levels in the developed world were 75 per cent by early 2013.

By the end of 2013, the total global Internet users will reach an estimated 2.7 billion worldwide. In developing countries, the number of Internet users more than tripled between 2007 and 2013, to reach more than 1.8 billion. Despite this rapid growth, however, less than a third of inhabitants in the developing world will be online by end of 2013.

Figure 3: Global ICT Developments and Broadband Penetration, 2008-2013



Source: ITU World Telecommunication/ICT Indicators database.

Note: * 2012 and 2013 data are based on estimates.

With the Converged Licensing Framework, telecom operators will be allowed to offer bundled services and steep discounts for their services (individually and in bundles). Commercial VoIP was put into service for fixed and mobile phones by Turk Telekom. TV broadcasting over internet started, and some other services now are being implemented. These services are being provided individually or as bundled with others.

3.4 Infrastructure Sharing

In a competitive environment, the issue of infrastructure sharing is of great relevancy as it can reduce both costs and environment pollution and allows room for more development in the sector. At the Global Regulators Symposium held in 2008, best practice guidelines on innovative infrastructure sharing strategies to promote affordable access for all were adopted. It was recognised that infrastructure sharing has potential benefits but there is need to safeguard competition and investment incentives and regulatory policy should among other issues promote open access to international capacity and international gateways. With this in place, there will be competitive environment that may encourage more shared and affordable access to communication services.¹⁶

The following part provides examples on country experiences of infrastructure sharing in a competitive environment.

3.4.1 Country Experience: People's Republic of China

Due to competition in the telecom sector in China, the telecom infrastructure is expanding at a rapid pace and telecom towers are multiplying. Extensive duplication and multiplication of such infrastructure wastes land resources and consumes raw material and energy. In 2008 China adopted a policy of impelling cooperation in construction and utilization of telecom infrastructure. The central government has strengthened the regulatory system and elaborated rules and policies in this context. The policy goal is to stop building new telecom tower and poles at the same place and to impel the rate and extent to continuously increase year after year.¹⁷

Following the conscious policy decision and regulatory intervention to enhance joint construction and telecom infrastructure sharing, China has made effective progress. By June 2010, new telecom towers have been decreased by 61 thousand, while new poles decreased by 99 thousand kilometres. New telecom sites and the others (including telecom towers) have been decreased by more than 77 thousand. More than 127 thousand kilometre transmission line has been cut back.

3.4.2 Country Experience: Ghana

Ghana has in place guidelines for construction and installation of electronic communication equipment towers. The Guidelines were developed by the Ministries of Local Government, Environment, Communications, the National Communications Authority as well as operators and site infrastructure building companies.¹⁸

The National Communications Authority has licensed the following three operators to provide communication infrastructure to other operators:

- AmericanTowers who took over the towers being used by MTN.
- HeliosTowers who took over the towers being used by TiGO.
- EATON who took over the towers being used by Ghana Telecom (majority owned by Vodafone, United Kingdom).

Each country is confronted with a series of problems such as excessive resource consumption, increasing environment pollution, frail eco-environment and so on. It is significant and urgent to save resources and protect environment. So, it may be necessary to adopt a policy of impelling cooperation in construction

¹⁶ www.itu.int/ITU-D/treg/Events/Seminars/GSR/GSR08

¹⁷ See ITU-D Study Group 1 document [1/012](#) (People's Republic of China), "Progress on impelling joint construction and telecom infrastructure sharing in China", 7 September 2010.

¹⁸ Information obtained from the National Communications Authority, Ghana.

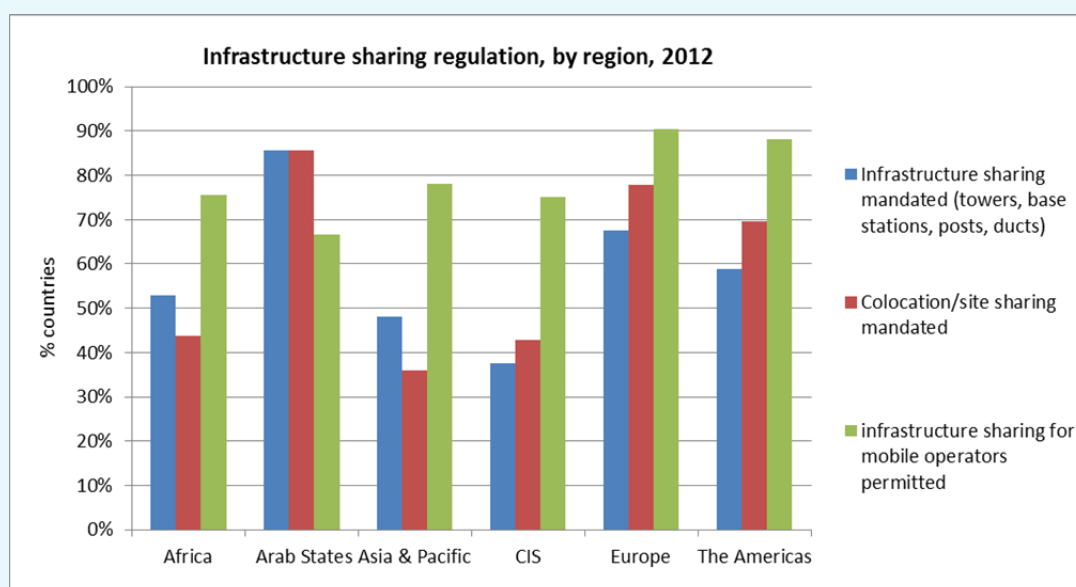
and utilization of telecom infrastructure. The conscious policy decision and regulatory intervention foster to enhance joint construction and telecom infrastructure sharing.

The sharing of mobile operators' infrastructure (such as Virtual Network Operators) was permitted in more than 80 per cent of the countries worldwide in 2012. Sharing of passive infrastructure and co-location/site sharing were mandatory in more than 59 per cent and 61 per cent of countries respectively (see Figure 4 below). Regulators may decide to mandate passive infrastructure and prohibit active infrastructure sharing, while others may allow both, or simply not intervene in this area.

3.4.3 Country experience: India

India has a policy for Infrastructure sharing. In addition to this, Chapter 5 on Operating Conditions of Unified Licensing Agreement provides under Clause 33 that sharing of active/passive infrastructure is to be governed by the terms and conditions of respective service authorization and amendment guidelines to be issued from time to time.

Figure 4: Infrastructure Sharing Regulation, 2012



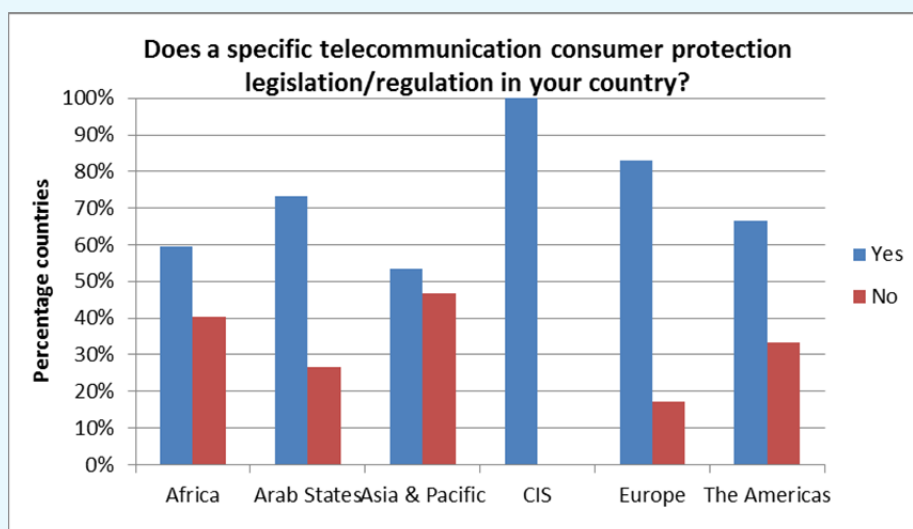
Source: ITU World Telecommunication Regulatory Database 2012

3.5 Consumer Protection in Competitive Market

In a competitive market, consumer protection is vital. It is important for there to be legal framework on service providers to provide consumers with accurate information to help consumers to make appropriate decisions.

By the end of 2012, 68 per cent of the countries worldwide have a specific telecommunication consumer protection legislation/regulation in place. With a majority of countries having adopted such law/regulation in all regions, specific telecommunication laws and regulations have been adopted in all CIS countries having completed the 2012 ITU Annual Regulatory Survey and in 83 per cent of the countries in Europe and in more than 70 per cent of the Arab States. In 91 per cent of the countries worldwide, the national telecom/ICT regulator is responsible for handling consumer complaints. The provision of comparative tariff information is increasingly being added to the mandate of national telecom/ICT regulators as 60 per cent of them were tasked with this responsibility in 2012 compare to 55 per cent in 2011.

Figure 5: Telecommunication Specific Consumer Protection Law and Regulation, by Region, 2012



Source: ITU World Telecommunication Regulatory Database 2012.

The following are examples on issues of consumer protection in competitive environment:

3.5.1 Country Experience: Republic of Korea

¹⁹In 2007, dominant telecom carriers were allowed to offer bundled services that include those services under price regulation on condition that these offerings do not harm competition and consumers. Discount schemes for bundled services vary depending on the composition of the products and are often combined with discounts for the long-term commitment, thereby making the terms and conditions very complicated. Out of concerns about consumer interests related to increasing convergence and competition, the Korean government recently made several related guidelines for the communications services providers to keep.

3.5.2 Country Experience: Mali

²⁰In Mali Ordinance No. 07.025/P-RM concerning competition and Decree No. 08-260/P-RM of 6 May 2008 provides the practical implementation of Ordinance No. 07-025/P-RM.

The said Decree includes a number of provisions on **consumer information and protection**, including *requirements to publicize prices and conditions of sale, provide user instructions, refrain from counterfeiting or selling or using out of date products, ensure that product/service prices are indicated on labels or otherwise displayed* and in the interests of the consumers, prohibits companies from engaging in any form of unfair competition (fixed prices, refusal to sell, misleading advertising) or anti-competitive practices (illicit cartels, abuse of a dominant market position).

Thus, as part of their respective remits, the minister responsible for the sector and the regulatory authority ensure that there is effective, healthy and fair competition to the benefit of users, that operators respect the confidentiality of correspondents and the principle of neutrality with regard to message content, protect personal data, adhere to environmental and health standards in the ICT/telecommunications sphere .

¹⁹ ITU-D Study Group 1 document [1/INF/8](#) (BDT), 9 September 2010.

²⁰ ITU-D Study Group 1 Rapporteur Group for Q18-2/1 document [RGQ18-2/1/14](#) (Mali), 15 February 2012.

3.5.3 Country Experience: Turkey

²¹The Consumer Protection Law, Act 4077 is a general purpose code and consists of basic rules for consumer protection on all goods and services. In the Electronic Communications Act No: 5809, “Ordinance on the Consumer Rights in the Telecommunications Sector” different specific rights of consumers are provided.

There are few basic problems foreseen with converging of services in **Turkey** as follows:

- Conflict and confusion among different authorities,
- The impact that convergence will cause on competition in the market
- Hardship of analyzing the converged services for regulations or rules,
- Preventing the damage of regulative acts upon development and improvement of these services.

3.6 Effects of Converging Services on the ICT Sector

Converging services have important influences on the ICT sector such as:

- New services are launched and new operators enter into the sector affecting players in the market especially their subscriber numbers and revenues.
- Development of converging services makes the boundaries between fixed and mobile services unclear and becoming more difficult to regulate.
- It will be more difficult for customers to collect information about available services and to understand new products and plans.
- An increase is expected in the number of operators that are able to provide full voice and data services to their customers
- New business models for operators expected to emerge with converging services.

A clear trend is emerging in the form of Fixed and Mobile Telephony Convergence (FMC). The aim is to provide both services with a single phone, which could switch between networks. Several industry standardization activities have been completed in this area such as the Voice Call Continuity (VCC) specifications defined by the 3G Partnership Project. Typically, these services rely on Dual Mode Handsets, where the customers' mobile terminal can support both the wide-area (cellular) access and the local-area technology (for VoIP).

Other areas of impact due to converged licensing framework are²²

- On regulatory organizations themselves and their structures;
- On simplification of authorizations process, licence types and its categories;
- On the number of service providers and subscribers;
- On the cost and quality of service;
- On socioeconomic status of the end users and their information usage pattern;
- On the market dynamics (e.g. behaviour and demand/supply characteristics of the Consumers , suppliers and intermediate agents);

²¹ ITU-D Study Group 1 document [1/INF/3](#), (Intel Corporation (United States of America)) 3 September 2010.

²² ITU-D Study Group 1 Rapporteur Group for Q10-3/1 document [RGQ10-3/1/INF/2](#) (Nepal), 11 April 2011.

- On roll-out/ development plans of offered services;
- On emergence of Interactive, innovative and enhanced services;
- On contribution to the information society.
- On the technologies and their integration into a converged platform mainly on the emergence of Next Generation Networks (NGN) or IP based technologies.

NGNs has resulted in provision of converged services, applications and diversified contents, which are quite diverse and come from different sectors such as telecommunications, broadcasting, lotteries, games and the entertainment industry. Concerns have been raised on the need to address converged services in an NGN environment with emphasis on assessment and evaluation of the applicable laws and regulations on NGN in the competitive converged market. It has been pointed out that there are limitations that exist under relevant national and international law, and appropriate solutions need to be found by stakeholders, including Regulators.²³

In a survey conducted by the ITU on consumer protection policies amongst its 193 Member states, focusing on convergence, it was revealed that there was lack of resources, strategies and tools available to regulators to protect consumers in a rapid converging environment.²⁴

Furthermore, emerging converged services have called on the need to focus on Intellectual Property Rights (IPRs) of which countries should ensure that there is legal framework for the same and operators adhere to the same. In addition, things are changing with competition, necessitating NRAs to work with the other institutions such as financial regulatory bodies, gaming boards, copyright organisations and others involved in regulating emerging services. Due to this, NRAs need to collaborate with the other institutions to come up with guidelines on working relationship with these institutions. This has called upon a number of regulators having to work with Central banks in their countries for putting in place a regulatory process for monitoring mobile banking services and address new issues coming up as well as competition issues such as dominance.

There is also a need to consider putting in place measures for regulators to ensure consumer protection in ICT applications. Converged services which resulted into the booming of e-transactions using electronic payment mechanisms of e-cards or internet payment tend to pose challenges to consumers with regards to their personal data. Legal framework on data protection needs to be considered as a way to address consumer protection in converged environment.

4 Analysis of Regulatory Experiences with Changes and Transition to Convergence

As indicated in Part 3 of this report, the ITU World Telecommunications Regulatory Database shows that the degree of competition in the telecom sector has increased with many players offering a range of services. Due to this and the experiences of NRAs highlighted herein, the following matters have led regulators to change and take measures on issues such as: anti-competitive practices, dominant operators, new converged services, infrastructure sharing, consumer protection in particular issues of security and privacy.

In the above list, the issues of anti-competitive behaviour and dominant operators have a great likelihood to be burning issues in competitive markets and thus require both NRAs and CAs to have in place working mechanism on how to handle the same.

²³ ITU-D Study Group 1 Rapporteur Group for Q10-3/1 document [RGQ10-3/1/11](#) (Benin), 23 April 2012.

²⁴ ITU-D Study Group 1 Rapporteur Group for Q18-2/1 document [RGQ18-2/1/29](#) (BDT), 27 March, 2013.

In a number of countries NRAs and CAs are required to take measures against operators who carry out anti-competitive practices. Such practices can be divided into two major groups: pricing issues and non-pricing issues.

Table 2: Anti-competitive Practices and Behaviour

Pricing issues	Non-pricing issues
– cross-subsidization	– refusal (or delay) to supply
– predatory pricing	– bundling arrangements
– price squeeze	– lock-in customers
– excessive pricing	– misuse of information
– price fixing	– bid rigging
	– market sharing

Pricing issues including telecom/ICT services are of great concerns to regulators as they affect consumers. Where an operator acts in an anti-competitive manner on a pricing issue, regulatory intervention is necessary so as to ensure fair play in the market. In the absence of or uncertainty about the effectiveness of competition in a market, it is often necessary for the regulator to intervene to mimic the pricing outcomes that would be expected in a competitive market until competitive market forces strengthen. Regulators have been advised to be cautious about intervening too early or too heavy-handedly, particular in markets that are characterized by new and innovative services and where the level of demand is not yet clear. This is to avoid distorting the development of that market, which could discourage the investment necessary to develop services in response to latent demand.²⁵

5 Evaluation of the Role of Telecom /ICT Regulators and Competition Authorities

5.1 The Working Relationship Between National Regulatory Authorities and Competition Authorities

In some countries National Regulatory Authorities (NRAs) and Competition Authorities (CAs) co-exist and each may be established under separate legislation with working relationship on competition issues. This can be based on NRAs being the telecom sector- specific regulator responsible to apply regulatory measures (both ex-ante and ex-post measures) to operators under a competitive environment while CAs are responsible for the competition and economic regulation issues of ICTS.²⁶ The CAs have powers to correct problems which result from actions that are contrary to competition rules such as abuse of dominant powers, anti-competitive behavior, mergers and acquisitions. However, there are other countries with no competition authorities, leaving competition matters in telecom under NRAs. Examples of such countries include, **Trinidad & Tobago, Georgia, Qatar, Sudan, Oman and Rwanda.**

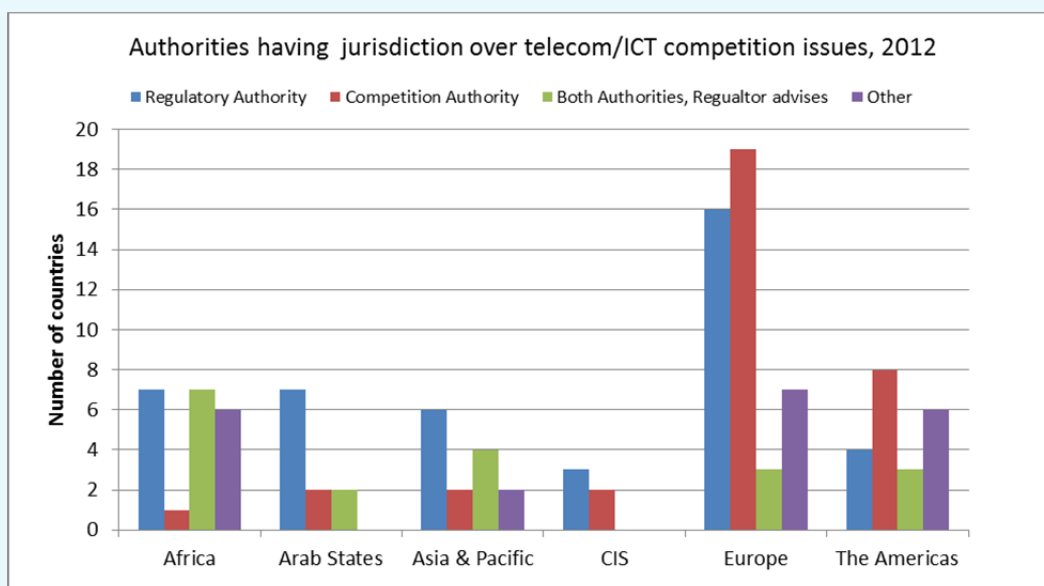
Competition authorities have been established in at least 64 per cent of the countries worldwide. This is the case in 90 percent of the countries in Europe, and 46 per cent of the countries in Africa. According to responses to the Annual Telecommunication Regulatory Survey, competition authorities have jurisdiction

²⁵ ITU-D Study Group 1 Rapporteur Group for Q12-3/1 document [RGQ12-3/1/14](#) (BDT) “ The regulation of prices in broadband environment”, 15 February 2012.

²⁶ ITU-D Study Group 1 Rapporteur Group for Q10-3/1 document [RGQ 10-3/1/16](#) (THALES Communications (France)) , 9 November, 2012.

over competition issues related to the telecom/ICT sector in most countries in Europe and in the majority of countries in the Americas, whereas in other regions, this competency is placed with the regulatory authorities. In 18 per cent of the countries worldwide, both authorities were involved in telecom related competition matters with the regulatory authorities providing advices to the competition authorities.

Figure 6: Authority in Charge of Telecom related Competition Issues, 2012

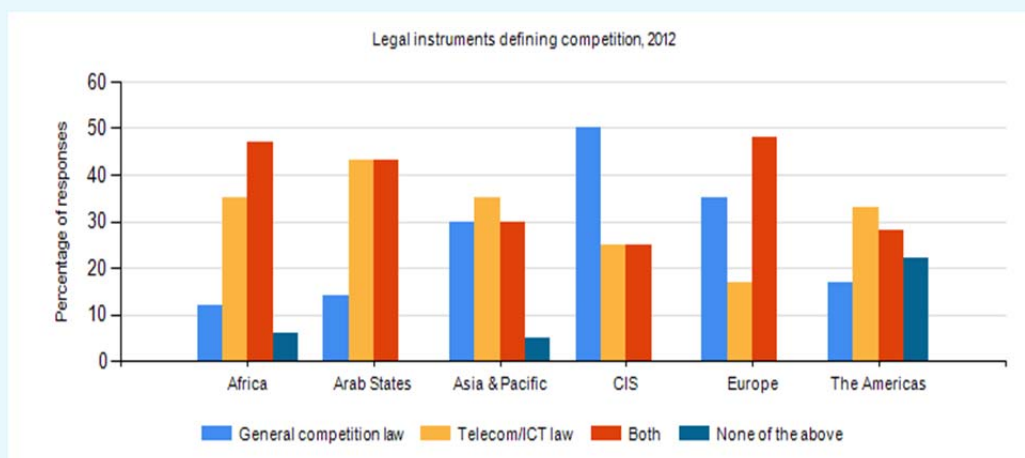


Source: ITU World Telecommunication Regulatory Database, 2012.

Note: Other relates to shared responsibilities, concurrent jurisdictions, etc.

The provision of competition is mainly defined in both the general competition law and the telecom/ICT law in which provisions on the concept of merger are included in 65 per cent of the countries. In CIS countries competition is mainly covered in the general competition law. The national telecom/ICT regulator was involved (providing advice, reviewing applications, receiving notification, etc.) in at least 60 per cent of the countries.

Figure 7: Legal Instruments Defining Competition, 2012



Source: ITU World Telecommunication Regulatory Database, 2012.

Ensuring consumers can actually benefit from greater choice and effectively switch operators/providers remains an issue, even in many liberalized markets. Consumers are often bewildered by the difficulty in evaluating and choosing among the various packages and price offers available, and may refrain from switching, due to lack of clarity and uncertainty. Even where number portability is available -as is the case in in 37 per cent of the countries worldwide for mobile and 25 per cent for fixed,²⁷ respectively - consumers may be charged for transferring their service. Structural issues, such as equipment incompatibility, may also inhibit switching.

In **Tanzania**, the Fair Competition Commission is responsible for managing competition issues and the Fair Competition Tribunal is the appellant body to which any aggrieved person may appeal on decisions made by the following regulatory bodies, the Electricity and Water Utility Regulatory Authority, the Tanzania Civil Aviation Authority, Surface Marine and Transport Regulatory Authority and the Tanzania Communications Regulatory Authority²⁸.

A person aggrieved by the decision of the Tanzania Communications Regulatory Authority may under Section 42 (2) of the Tanzania Communications Regulatory Authority Act, 2003, appeal to the Fair Competition Tribunal. The appeal is allowed only on issues relating to point of law-Section 42 (1). The Fair Competition Tribunal is to determine the appeal under Section 42 (4) of the TCRA Act and its decision is final.

As issues of competition are handled by both NRAs and CAs, some countries such as **Namibia** have in place Memorandum of Agreement between the two bodies so that there is clear framework on functions of investigation, merger and complaint handling. This is a good way to avoid overlaps and conflicts between the jurisdictions and policies of the two bodies. In **Egypt**, the National Telecommunication Regulatory Authority (NTRA) being the national authority competent to regulate the telecommunications sector in Egypt works with the Egyptian Competition Authority (ECA) as the body responsible to monitor all economic activities, taking all needed measures for investigation, facts finding and evidence collection in order to encounter all agreements and practices that lead to the prevention, restriction or harm of free

²⁷ ITU World Telecommunication Regulatory database.

²⁸ See Document [RGQ10-3/1/13](#) (Tanzania), "Competition Assessment in the Tanzania Telecommunications Market" with Tanzania's position Competition issues in the telecommunications sector, 24 February 2012.

competition in Egypt and resulting in the conditioning of crimes that are subject to penalization and/or punishment pursuant to the provisions of the above-mentioned law.²⁹

In fulfilment to the intention of both NTRA and ECA to pay special attention to the interests of the market and the consumers, as well as boosting cooperation and coordination between the two parties to support free competition in the ICT sector and react to the new challenges related to competition in the telecommunication sector, both parties have decided to sign a Cooperation Protocol in June 2011.

The main terms of the Protocol are as follows:

- The Protocol aims to facilitate the cooperation between both parties concerning the promotion of competition in telecommunication sector and the exchange of information and expertise, through the following:
 - The exchange of information between both parties in matters of common interest.
 - The mutual provision of technical support in the areas of competition and communications and holding joint workshops and conferences, in which both parties shall render the public aware of competition law and other activities in telecommunications sector.
 - The unification, as far as possible, of the economic and legal analyses methods conducted by each of the NTRA and ECA in telecommunication sector, especially those related to the definition of the relevant market and proof of dominance in the market.
 - The determination of the framework of coordination and cooperation in order to encounter the practices that result in the prevention, restriction or harm of free competition.
 - The cooperation and coordination in matters related to bidders' collusion in auctions held by the NTRA, as well as mergers and acquisitions projects in the telecommunication sector.
- The Protocol considers the ex-ante regulations as an inherent right and an essential competence essential of the NTRA in accordance with the Telecommunications Law. These ex-ante regulations include the following:
 - Determining all functions and activities related to the liberalization of the telecom sector, including the preparation of market studies, carrying out feasibility studies for the entry of new entrants, calculating the economic return to the country as a result of the sector liberalization, followed by licensing process and monitor of all technical, commercial and legal obligations set forth in the licenses.
 - Determining the Licensees' obligations concerning the service provision and service pricing, and the approval of the special offers that are based on cost and in accordance with the non-discrimination requirements among Licensees operating in the market.
 - Creating and boosting a fair competitive environment for all telecommunication operators on non-discriminatory basis, and in particular making the essential facilities available for the new entrants as such facilities might be owned by other Licensees.
 - Studying market analysis which includes the determination of the relevant market for the service, and the rules regulating the determination of operators enjoying significant market powers to ensure that a free and fair competitive environment is available between companies.

²⁹ ITU-D Study Group 1 Document [1/INF/37](#) (Egypt), 18 August 2011.

- With regard to the ex-post regulations, the NTRA and ECA are entitled to deal with practices that are suspected to be monopolistic or anti-competitive and in accordance with the following coordination procedures:
 - The NTRA shall be responsible for the following:
 - Notify the ECA, as soon as possible, of the practices, and deeds that are suspected to be monopolistic and which the NTRA invites the ECA to take the needed action to investigate and collect evidence in this regard;
 - Providing the ECA the soonest with its opinion concerning the practices investigated by the ECA competition based on a complaint.
 - The ECA shall do the following:
 - Notify the NTRA, as soon as possible, that it has received a complaint or request or has launched an initiative related to the ICT sector;
 - Provide technical support to the NTRA upon request in matters related to competition enhancement and the restrictions enforced upon market entry;
 - Provide technical support to the NTRA upon request concerning the practices that are suspected to be monopolistic, and investigated by the NTRA based on a complaint.

For a conducive licensing framework in a competitive environment, it is crucial that there be clear roles and responsibilities of NRAs and CAs and areas of co-operation be identified in legislation or other instrument as is the case in Namibia and Egypt. Due to the diverse nature of communication services, it can be noted that NRAs are now not only having a working relationship with CAs but also other institutions. Where it is mobile banking, the Central bank needs to be consulted and approval granted. On issues of artist works or Intellectual property matters, telecom regulators need to partner with relevant bodies responsible for copyright issues. There are also a number of new services, including games that have opened up the doors to new functions for institutions that were not involved in communication issues such as Gaming Boards or Regulators. At the Global Symposium for Regulators held in 2011 (GSR 11) discussions were carried out on the role of regulators and other institutions responsible for emerging services such as mobile banking. It was observed that while telecom regulators have been focusing on reliability and security of the communications infrastructure that connect financial and non-financial institutions to their customers as well as to each other, financial regulators have been responsible for banking services and competition authorities for enforcing competition issue. With the increase of mobile banking services, a blurring boundary has been noticed between telecom regulators and financial regulators on issues of safety and accessibility of electronic money resulting on the need to streamline licensing for mobile banking services and for regulators to follow a checklist³⁰.

5.2 Mergers of telecommunications companies and the Role of Regulatory and Competition Authorities

A merger is a structural fusion of two firms that results in common ownership and management structure. As is the case in many types of businesses, merger of companies may be motivated by factors such as for cost savings from synergies between the firms, economies of scale and scope, efficiencies from vertical integration and geographical diversification or cross selling of products.³¹

³⁰ See page 11 , 25-27 discussion paper on Mobile Banking made at GSR 2011 and ITU-D Study Group 1 Rapporteur Group for Q10-3/1 document [RGQ10-3/1/9](#)

³¹ ICT Regulation Toolkit, Module 2-See www.ictregulationtoolkit.org/en/Section.1560.html

We will first examine the relevancy of merger policies. There are four main reasons for merger policies. First of all, once a market is dominated by one or a few strong firms, the competition authorities may not have the resources or the information to pursue every anti-competitive action so that preventing the merger is a more cost effective way of maintaining competition. Secondly, the merger policy may be to the benefit of the merging firms- it might be problematic if two firms are allowed to merge and become dominant only to be aggressively regulated after the merger, or even broken up by the competition authorities some years after the two businesses have been integrated. Thirdly, even if fully resourced, the competition authorities might not be able to remedy all the anticompetitive effects of a change in the market structure. Fourthly, the anti-competitive effects of a merger extend beyond the parties: when a merger creates a dominant firm and it raises prices, it creates a price umbrella and other competitors raise prices to the same level. Merger policy can be said overall to have the power to prevent the creation of markets structures that lead to anticompetitive effects outside the reach of competition law.

In Europe, the regulation of mergers and acquisitions is the principal instrument by which competition authorities control the structure of an industry. It has been argued that since dominant firms can be regulated under Article 82 of the European Community Treaty and as such there is no need for a merger policy. This is to say that mergers can be allowed creating a dominant firm in which its behavior can be regulated ex post. Furthermore, there is evidence that most mergers do not reduce competition, so that merger policy is a disproportionate policy.³²

In certain cases the European Commission's analysis of a mergers effects as informed by considerations of whether the merged entity will raise rivals costs after the merger, thereby considering whether the merged entity is itself likely to erect new entry barriers. For example in Vodafone Airtouch/Mannesmann the merged entity would be able, through its control of leading mobile phone networks in several EU member states to develop advanced seamless pan European mobile telecommunications services while if competitors were to offer a similar service they would need to cooperate with the merged entity and gain access to part of its telephone network. According to the Commission, the effect of the merger would be an' increased ability and incentive of the new entity to eliminate actual and/or potential competition'. This is so because the merged entity could either refuse to give others access to its network or allow access only on terms that would make the competing services unattractive.

In the **United States**, proposal of merger of corporations is reviewed by one of two federal agencies – either the U.S. Department of Justice (DOJ) or the U.S. Federal Trade Commission (FTC). Which of these agencies will review the proposed merger depends on the outcome of a process known as “clearance,” under which the DOJ and FTC agreed that, to avoid unnecessary duplication, neither will proceed with a review until the other gives its clearance. Companies holding FCC licenses are required to obtain approval from two federal agencies to complete a merger -- the DOJ and the FCC.

Sections 7 and 11 of the Clayton Act provide the FCC with authority to review common carriers' proposed mergers. These antitrust provisions empower the FCC to deny a proposed merger of “common carriers engaged in wire or radio communication or radio transmission of energy” where “in any line of commerce or in any activity affecting commerce in any section of the country, the effect of such acquisition may be to substantially lessen competition, or tend to create a monopoly.”

Notwithstanding this explicit merger review authority under the antitrust provisions of the Clayton Act, the FCC most often proceeds pursuant to provisions contained in the Communications Act of 1934, as amended (“the Act” or “Communications Act”). Under Sections 214 and 310 of the Act, carriers seeking to transfer direct or indirect control over certain authorizations and licenses must obtain prior approval from the FCC. The FCC will grant such approval only if it finds the transfers to be in the public interest.

³² EC Competition Law-Giorgio Monti, page 246.

Thus, the FCC reviews mergers through its power to approve or deny the transfer of the licenses it issues under the Communications Act.³³

In some countries mergers of companies in the form of joint ventures is permitted subject to certain requirements. These may include notifications, inquiry and decision on whether to allow or prohibit the merger on reasons that it will substantially lessen competition.³⁴

Globally there are different bodies to oversee and take action on mergers. In some countries it is the Competition Council, others Office for the Protection of Competition, Fair Trading Commission or Government Ministry of Trade or Ministry of Commerce.

In addition there are different application on issues such as filing deadlines for companies intending to merge ranging from 7 days, 15 days or 30 days and notification thresholds whereby in most cases parties turnover required to exceed a certain amount. From the above discussion, parties intending to merge have a number of requirements to adhere to.

6 Guidelines and Concluding Remarks

This study has revealed that convergence has a significant role in stimulating competition in the communications sector. With changes in the sector, there is need for Member States to consider the following guidelines:

6.A Guidelines on Regulatory Measures on Competition in a Converged Telecommunications/ICT Environment

1. The NRAs³⁵ shall assess, define and determine the relevant communications market(s).
2. In determining the relevant communications markets, the NRAs shall take into account the following:
 - (a) Products or services that make up a specific market, as well as the geographic scope of that market;
 - (b) Demand side substitutability, in order to measure the extent to which consumers are prepared or able to substitute other products or services for the products or services supplied by the licensee in question.
 - (c) Supply-side substitutability, to determine the extent to which suppliers other than the licensee in question are able to supply products or services that provide a competitive alternative to consumers.
3. NRAs shall develop methodology to be used in the determination and designation of dominant licensees in the communications market.
4. In determining whether a licensee is in a dominant position, the NRAs may consider the following factors:
 - (a) The market share of a licensee, determined by reference to revenues, numbers of subscribers, traffic or volumes of sales;

³³ Document [1/189](#) (United States of America), 29 August 2012.

³⁴ Australia- See Section 45 and 47 Of the Competition and Consumer Act.

³⁵ "NRAs" means National Regulatory Authority and includes any relevant regulatory authority for telecommunications/ICT.

- (b) The overall size of the licensee in comparison to competing licensees;
 - (c) Control of network facilities or other infrastructure, access to which is required by competing licensees and that cannot, for commercial or technical reasons, be duplicated by competing licensees;
 - (d) The absence of buying power or negotiating position by customers or consumers, including switching costs and any other barriers to switching service providers;
 - (e) Ease of market entry and the extent to which actual or potential market entry protects against the exercise of market power such as raising prices;
 - (f) The rate of technological or other change in the market, and related effects for market entry or the continuation of a dominant position.
5. NRAs shall impose obligations on licensees with significant market power requiring them among other issues to:
- (a) Provide services under non-discriminatory conditions;
 - (b) Charge tariffs reflecting relevant costs; and
 - (c) Maintain separate books of account for each service as may be prescribed by the NRAs from time to time and shall not cross-subsidize the prices for any service it offers in the market with revenue from the sale of communication systems and services.
6. NRAs shall issue Rules of fair competition relating to the prohibition of:
- (a) anti-competitive agreements or any arrangement, decisions of concerted practices;
 - (b) abuse of dominant position by a dominant operator;
 - (c) anti-competitive mergers, acquisitions, consolidations, takeovers, or such anti-competitive arrangements that may result in changes in market structure in terms of ownership and control; and
 - (d) all other practices and acts with an effect on fair competition including unfair methods of competition, unfair or deceptive acts or practices, the purpose or effect of which is to distort competition in the communications market.
7. A licensee shall not engage in any activity, whether by act or omission, which has or is intended to or is likely to have the effect of unfairly preventing, restricting or distorting competition where the act or omission is done in the course of or as a result of or in connection with any business activity relating to communication services.
8. For the avoidance of doubt, a licensee shall be deemed to have engaged or to be engaged in an anti-competitive act, if by commission or omission that act has an appreciable effect on fair competition in the communications market.
- (a) An act or omission of a licensee with a dominant position whether independently or in any form of collusion with others shall constitute or amount to an abuse of its dominant position where the act or omission involves:
 - (b) Price abuses or anti-competitive pricing like predatory pricing, price squeezes, cross-subsidizations, price-discrimination or any form of direct or indirect imposition of unfair purchasing or selling prices or other unfair trading conditions;
 - (c) Any conduct which exploits customers or suppliers through excessively high prices or discriminatory prices or terms, conditions or conduct which removes or limits competition from existing competitors or discourage entry or which excludes new undertakings from entering the market through predatory behaviour, vertical restraints or refusal to supply existing or potential competitors;

- (d) Limiting production or supply of services, markets or technical development to the prejudice of consumers;
 - (e) Applying dissimilar conditions to equivalent transactions with other parties, which place them at a competitive disadvantage;
 - (f) Making the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of the contracts;
 - (g) Predatory network alterations, where the dominant licensee alters the physical or logical interface of its network in a manner that imposes significant costs on interconnected licensees without any legitimate business, operational or technical justification;
 - (h) Refusal to supply or grant access to facilities;
 - (i) Refusal to interconnect or act in good faith during interconnection negotiations;
 - (j) Engaging in unfair methods of competition that improperly deter or are likely to deter entry into the communications markets or restrict or are likely to restrict existing competition in the communications markets for reasons unrelated to the availability, price or quality of the service that a prospective or current licensee offers or seeks to offer through:
 - (i) False or misleading claims;
 - (ii) Degradation of service availability or quality;
 - (iii) Provision of false or misleading information to competitors; or
 - (iv) Interference with end-user or supplier relationship.
9. NRAs should review their regulatory frameworks to ensure flexible approach to emerging services.
10. NRAs should create working relationships with other regulatory bodies such as banking and financial regulators on emerging financial services including mobile banking and mobile commerce.
11. NRAs to consider putting in place framework that accommodates emerging issues in telecommunications/ICT and working relationship with responsible bodies for: law enforcement, environment issues, education, healthcare, games and copy right issues.

6.B Guidelines on Merger of Telecommunication Companies/Licensees

1. To ensure effective enforcement against anti-competitive behaviour in the Converged Licensing Framework a good working relationship is required between NRAs and CAs. The said relationship can be defined in a cooperation protocol or any other instrument to guide the institutions. In addition, it is important that there is cooperation among regulators from different countries on issues of mergers.
2. NRAs to consider:
 - (a) application process on mergers be made only by operating licensees;
 - (b) process for issuance of public notice on merger of the two licensees;
 - (c) put in place cooperation between NRAs and CAs on various issues such as information and resource sharing;
 - (d) to impose licence obligations on licensees who merge requiring them to among other issues to provide services under non- discriminatory conditions and charge tariffs reflecting relevant costs.
 - (e) reviewing spectrum assigned to merging licensees.

6.C Additional Guidelines to be Considered

In addition to the guidelines on regulatory measures on competition in a converged environment and merger of telecommunication licensees, Member States are advised to consider the following Best Practice Guidelines on Regulatory Approaches to Advance the Deployment of Broadband, Encourage Innovative and Enable Digital Inclusion for All³⁶:

- **Spectrum Allocation:** In a competitive market regulations need to address efficient usage of spectrum. The best approach is incentive based, market driven approach to making spectrum available enabling inter-platform competition and spurring innovation.
- **Review of the Regulatory Framework to Accommodate Emerging services:** The ICT sector is evolving with emerging services and application such as mobile banking being developed. There is need to review the regulatory frameworks to ensure a flexible approach to emerging services.–In addition, there is need to build working relationships between telecom and financial regulators on financial services such as mobile banking. As well as put in place a legal framework for relationship between telecom regulators and responsible bodies for games and copy right issues.
- **Enforcing Intellectual Property Rights:** Emerging services and application are using artistic work such as music, literature and movies which call on designing rules and procedures for copyright enforcement. By providing protection of intellectual property, researchers and innovators will be motivated to continue to be creative in the current digital environment.

³⁶ GSR 11- Best Practice Guidelines.

Annexes

Annex 1: Composition of Rapporteur and Vice-Rapporteurs

Annex 2: References

Annex 1: Composition of Rapporteur and Vice-Rapporteurs

Ms. Fortunata B. K. Mdachi (Tanzania)	Rapporteur
Ms. Marcelle M'Poue (Cote d'Ivoire)	Vice- Rapporteur
Mr. Ahmadou Traoré (Mali)	Vice- Rapporteur
Mr. Shree Badra Wagle (Nepal)	Vice- Rapporteur
Mr. Abdou Malam Garba (Niger)	Vice- Rapporteur
Mr. Baye Samba Diop (Senegal)	Vice- Rapporteur
Mr. Mahmut Haluk Koc (Türk Telekom Group, Turkey)	Vice- Rapporteur

Annex 2: References

Contributions to Study Group 1 Meetings for Question 10-3/1

Number	Received	Source	Title
[189]	2012-08-29	United States of America	Practice of the United States in Reviews of Corporate Mergers by the Federal Communications Commission
[171]	2012-08-02	BDT Focal Point for Question 10-3/1	Expanding the Telecom/ICT Regulator's mandate and cooperation among Regulatory Authorities in different sectors
[170]	2012-08-02	BDT Focal Point for Question 10-3/1	Overview of the ICT sector and regulatory updates
[153] +Ann.1	2012-07-09	Rapporteur for Question 10-3/1	Draft Report on Question 10-3/1
[126]	2012-06-04	Rapporteur for Question 10-3/1	Report of the Rapporteur Group Meeting on Question 10-3/1, Geneva, 26 April 2012
[83]	2011-08-11	Rapporteur for Question 10-3/1	Overview of Question 10-3/1 and draft outline report
[72]	2011-07-12	Rapporteur for Question 10-3/1	Draft report on Question 10-3/1
[53]	2011-06-08	Rapporteur for Question 10-3/1	Report of the Rapporteur's Group meeting on Question 10-3/1, Geneva, 2 May 2011
[31]	2010-09-13	Rapporteur for Question 10-3/1	Draft Work Programme for Question 10-3/1
[12]	2010-09-07	China (People's Republic of)	Progress on impelling joint construction and telecom infrastructure sharing in China
[6]	2010-09-06	BDT Focal Point for Question 10-3/1	Contribution from BDT Focal Point for Question 10-3/1

Contributions to Study Group 1 Rapporteur Group Meetings for Question 10-3/1

[C 25]	2013-04-18	Telecommunication Development Bureau	Final List of Participants for the Rapporteur Group Meeting for Question 10-3/1, Geneva, 17 April 2013
[C 24]	2013-04-12	Rapporteur for Question 10-3/1	Draft report on Question 10-3/1
[C 23] (Rev.1)	2013-03-06	Rapporteur for Question 10-3/1	Draft Agenda for Rapporteur Group Meeting for Question 10-3/1, Geneva, Wednesday, 17 April 2012
[C 22] (Rev.1)	2013-02-28	BDT Focal Point for Question 10-3/1	Overview of the ICT sector and regulatory updates based on responses to the ITU annual telecommunication regulatory survey, for selected sections of the Draft Report on Question 10-3/1
[C 21] +Ann.1-3	2013-02-21	BDT Focal Point for Question 10-3/1	Summary of 2012 Survey Results
[C 20]	2013-02-15	Rapporteur for Question 10-3/1	Draft Guidelines on regulatory measures on competition in a converged telecommunications/ICT environment
[C 19]	2013-02-15	Rapporteur for Question 10-3/1	Draft Guidelines on merger of telecommunication licensees
[C 18]	2013-02-14	BDT Focal Point for Question 10-3/1	Competition and regulation in a converged broadband world
[C 16]	2012-11-09	THALES Communications	Importance of economic regulation of ICTs/competition authority

Q10-3/1: The impact of the licensing and authorization regime and other relevant regulatory measures on competition in a converged telecommunication/ICT environment

[C 15]	2012-05-01	Telecommunication Development Bureau	Final list of participants for the Rapporteur Group Meeting on Question 10-3/1, Geneva, 26 April 2012
[C 14]	2012-04-16	Nepal(Republic of)	Telecommunications Regulatory Designs and Licensing Scheme in Some Countries
[C 13]	2012-02-24	Tanzania (United Republic of)	Competition Assessment in the Tanzania Telecommunications Market
[C 12] +Ann.1-4	2012-04-12	BDT Focal Point for Question 10-3/1	ITU World Telecommunication Regulatory Database Reports
[C 11]	2012-03-26	Benin (Republic of)	Impact de la réglementation sur les NGN: Cas du Bénin
[C 10]	2012-03-22	Senegal (Republic of)	Collaboration entre régulateur sectoriel et régulateur de la concurrence
[C 9]	2012-03-08	BDT Focal Point for Question 10-3/1	Overview of BDT products and services related to the Question
[C 8]	2012-02-02	Rapporteur for Question 10-3/1	Draft Agenda for Rapporteur Group Meeting on Question 10-3/1, Geneva, 26 April 2012
[C 7]	2011-05-03	Telecommunication Development Bureau	Final List of participants for the Rapporteur's Group Meeting on Question 10-3/1, Geneva, 2 May 2011
[C 6] +Ann.1	2011-05-03	Rapporteur for Question 10-3/1	Overview of Question 10-3/1 and Draft Outline Report
[C 5]	2011-04-14	BDT Focal Point for Question 10-3/1	Contribution from BDT Focal Point for Question 10-3/1
[C 4]	2011-05-02	N/A	CANCELLED
[C 3]	2011-04-08	Togolese Republic	Législation togolaise
[C 2]	2011-03-08	BDT Focal Point for Question 10-3/1	Input from BDT Programme 3: Enabling environment (2010/2011)
[C 1]	2011-02-08	Rapporteur for Question 10-3/1	Draft agenda of the Rapporteur's Group meeting on Question 10-3/1, Geneva, Monday 2 May 2011

Documents submitted for information to Study Group 1 Meetings for Question 10-3/1

Number	Received	Source	Title
[61]	2013-08-27	BDT Focal Point for Question 10-3/1	GSR13 Best practice guidelines on the evolving roles of both regulation and the regulators in a digital environment
[60]	2013-08-20	Côte d'Ivoire (Republic of)	Evolution de la réglementation et du cadre institutionnel dans le secteur des Télécommunications/TIC en Côte d'Ivoire
[37]	2011-08-18	<u>Egypt (Arab Republic of)</u>	Cooperation between national regulatory authorities and competition authorities: case study of Egypt
[35]	2011-08-18	<u>China (People's Republic of)</u>	Co-Governance among government departments on licensing and authorization of Internet business in China
[22] +Ann.1	2011-08-19	<u>BDT Focal Point for Question 10-3/1</u>	Compilation of results on the concept of dominance based on responses to the ITU Tariff Policies Survey 2010
[21]	2011-08-19	<u>BDT Focal Point for Question 10-3/1</u>	A snapshot of ICT market and regulatory trends
[14]	2011-08-08	<u>Cameroon (Republic of)</u>	Le nouvel environnement législatif et réglementaire des communications électroniques du Cameroun
[8]	2010-09-14	<u>Türk Telekom Group</u>	Convergence and converging services regulation

Documents submitted for information to Study Group 1 Rapporteur Group Meetings for Question 10-3/1

[INF 4]	2011-04-21	BDT Programme 4	About the ITU Academy
[INF 3] +Ann.1	2011-04-14	BDT Focal Point for Question 10-3/1	ITU World Telecommunication Regulatory Database Report on Licensing
[INF 2]	2011-04-11	Nepal(Republic of)	The impact of the licensing and authorization regime and other relevant regulatory measures
[INF 1]	2011-04-11	Tanzania (United Republic of)	Competition in the converged licensing framework: The case of Tanzania

Reports of the Rapporteur Group Meetings (April/May) for Question 10-3/1

Number	Received	Source	Title
[3]	2013-04-17	Rapporteur for Question 10-3/1	Report of the Rapporteur Group Meeting on Question 10-3/1, Geneva, 17 April 2013
[2]	2012-05-10	Rapporteur for Question 10-3/1	Report of the Rapporteur Group Meeting on Question 10-3/1, Geneva, 26 April 2012
[1]	2011-05-06	Rapporteur for Question 10-3/1	Report of the Rapporteur's Group Meeting on Question 10-3/1, Geneva, 2 May 2011

Reports of the Study Group 1 Rapporteur Group Meetings (September) for Question 10-3/1

Number	Received	Source	Title
[32]	2013-09-11	Rapporteur for Question 10-3/1	Report of the Rapporteur Group meeting on Question 10-3/1 (Geneva, 9 September 2013)
[22] (Rev.1)	2012-09-10	Rapporteur for Question 10-3/1	Report of the Rapporteur Group meeting on Question 10-3/1 (Geneva, 10 September 2012)
[11]	2011-09-05	Rapporteur for Question 10-3/1	Report of the Rapporteur Group meeting on Question 10-3/1 (Geneva, 5 September 2011)
[2] (Rev.1)	2010-09-21	Rapporteur for Question 10-3/1	Report of the Meeting of the Rapporteur's Group on Question 10-3/1 (Geneva, Monday 20 September 2010, 1615-17-30)

Other documents

1. EC Competition Law – Giorgio Monti.
2. Cases and Materials on The Competition Law of the European Union, Eleanor M. Fox, 2nd edition, American Casebook Series.
3. Competition, Volume 1- Practical Law Company, 2011.
4. ITU-infoDev ICT Regulation Toolkit- www.ictregulationtoolkit.org
5. Discussion paper on Mobile Banking at the Global Symposium for Regulators, 2011.
6. Mergers and Acquisitions in 60 jurisdictions worldwide 2011, Contributing editor: Casey Cogut, Publishers Getting the Deal Through in association with Aabo Evenson & co Advokatfirma & others.
7. Competition Law & Policy-A Tool for Development in Tanzania, ESRF, CUTS, 2002.

**International Telecommunication Union (ITU)
Telecommunication Development Bureau (BDT)**

Office of the Director

Place des Nations
CH-1211 Geneva 20 – Switzerland
Email: bdtdirector@itu.int
Tel.: +41 22 730 5035/5435
Fax: +41 22 730 5484

**Deputy to the Director and
Director, Administration and
Operations Coordination
Department (DDR)**

Email: bdtdputydir@itu.int
Tel.: +41 22 730 5784
Fax: +41 22 730 5484

**Infrastructure Enabling
Environment and
e-Applications Department (IEE)**

Email: bdtiee@itu.int
Tel.: +41 22 730 5421
Fax: +41 22 730 5484

**Innovation and Partnership
Department (IP)**

Email: bdtip@itu.int
Tel.: +41 22 730 5900
Fax: +41 22 730 5484

**Project Support and Knowledge
Management Department (PKM)**

Email: bdtpkm@itu.int
Tel.: +41 22 730 5447
Fax: +41 22 730 5484

Africa

Ethiopia

**International Telecommunication
Union (ITU)**

Regional Office

P.O. Box 60 005
Gambia Rd., Leghar ETC Building
3rd floor
Addis Ababa – Ethiopia

Email: itu-addis@itu.int
Tel.: +251 11 551 4977
Tel.: +251 11 551 4855
Tel.: +251 11 551 8328
Fax: +251 11 551 7299

Cameroon

**Union internationale des
télécommunications (UIT)**

Bureau de zone

Immeuble CAMPOST, 3^e étage
Boulevard du 20 mai
Boîte postale 11017
Yaoundé – Cameroon

Email: itu-yaounde@itu.int
Tel.: +237 22 22 9292
Tel.: +237 22 22 9291
Fax: +237 22 22 9297

Senegal

**Union internationale des
télécommunications (UIT)**

Bureau de zone

19, Rue Parchappe x Amadou
Assane Ndoye
Immeuble Fayçal, 4^e étage
B.P. 50202 Dakar RP
Dakar – Senegal

Email: itu-dakar@itu.int
Tel.: +221 33 849 7720
Fax: +221 33 822 8013

Zimbabwe

**International Telecommunication
Union (ITU)**

Area Office

TelOne Centre for Learning
Corner Samora Machel and
Hampton Road
P.O. Box BE 792 Belvedere
Harare – Zimbabwe

Email: itu-harare@itu.int
Tel.: +263 4 77 5939
Tel.: +263 4 77 5941
Fax: +263 4 77 1257

Americas

Brazil

**União Internacional de
Telecomunicações (UIT)**

Regional Office

SAUS Quadra 06, Bloco "E"
11^o andar, Ala Sul
Ed. Luis Eduardo Magalhães (Anatel)
70070-940 Brasília, DF – Brazil

Email: itubrasilia@itu.int
Tel.: +55 61 2312 2730-1
Tel.: +55 61 2312 2733-5
Fax: +55 61 2312 2738

Barbados

**International Telecommunication
Union (ITU)**

Area Office

United Nations House
Marine Gardens
Hastings, Christ Church
P.O. Box 1047
Bridgetown – Barbados

Email: itubridgetown@itu.int
Tel.: +1 246 431 0343/4
Fax: +1 246 437 7403

Chile

**Unión Internacional de
Telecomunicaciones (UIT)**

Oficina de Representación de Área

Merced 753, Piso 4
Casilla 50484, Plaza de Armas
Santiago de Chile – Chile

Email: itusantiago@itu.int
Tel.: +56 2 632 6134/6147
Fax: +56 2 632 6154

Honduras

**Unión Internacional de
Telecomunicaciones (UIT)**

Oficina de Representación de Área

Colonia Palmira, Avenida Brasil
Ed. COMTELCA/UIT, 4.º piso
P.O. Box 976
Tegucigalpa – Honduras

Email: itutegucigalpa@itu.int
Tel.: +504 22 201 074
Fax: +504 22 201 075

Arab States

Egypt

**International Telecommunication
Union (ITU)**

Regional Office

Smart Village, Building B 147, 3rd floor
Km 28 Cairo – Alexandria Desert Road
Giza Governorate
Cairo – Egypt

Email: itucairo@itu.int
Tel.: +202 3537 1777
Fax: +202 3537 1888

Asia and the Pacific

Thailand

**International Telecommunication
Union (ITU)**

Regional Office

Thailand Post Training Center, 5th
floor,
111 Chaengwattana Road, Laksi
Bangkok 10210 – Thailand

Mailing address
P.O. Box 178, Laksi Post Office
Laksi, Bangkok 10210 – Thailand

Email: itubangkok@itu.int
Tel.: +66 2 575 0055
Fax: +66 2 575 3507

Indonesia

**International Telecommunication
Union (ITU)**

Area Office

Sapta Pesona Building, 13th floor
Jl. Merdan Merdeka Barat No. 17
Jakarta 10001 – Indonesia

Mailing address:
c/o UNDP – P.O. Box 2338
Jakarta 10001 – Indonesia

Email: itujakarta@itu.int
Tel.: +62 21 381 3572
Tel.: +62 21 380 2322
Tel.: +62 21 380 2324
Fax: +62 21 389 05521

CIS countries

Russian Federation

**International Telecommunication
Union (ITU)**

Area Office

4, Building 1
Sergiy Radonezhsky Str.
Moscow 105120
Russian Federation

Mailing address:
P.O. Box 25 – Moscow 105120
Russian Federation

Email: itumoscow@itu.int
Tel.: +7 495 926 6070
Fax: +7 495 926 6073

Europe

Switzerland

**International Telecommunication
Union (ITU)**

**Telecommunication Development
Bureau (BDT)**

Europe Unit (EUR)

Place des Nations
CH-1211 Geneva 20 – Switzerland
Switzerland

Email: euregion@itu.int
Tel.: +41 22 730 5111



International Telecommunication Union
Telecommunication Development Bureau

Place des Nations
CH-1211 Geneva 20

Switzerland

www.itu.int