

1.3

Authorization and Competition

This chapter outlines ICT regulation in the areas of authorization and competition and consists of the following two sections.

1.3.1 AUTHORIZATION

Authorization is addressed in **Module 3**, Authorization of Telecommunication/ICT Services. It is a general term applied to all the legal instruments (such as licenses or concession agreements) used to facilitate entry to the electronic communications markets for services (including content) and networks. These legal instruments set out the rights and obligations of the authorized party as well as of the government in the case of concession agreements. The authorization process is the means of introducing and encouraging competition in the sector.

Granting an authorization can confer certain privileges on the grantee, especially where there are a limited number of authorizations. Consequently, the authorization process is best performed outside the political process. In circumstances where only a small number of operators are to be authorized, transparent competitive processes are considered best practice. While the use of radio spectrum is most frequently associated with limited market entry, there is a growing presence of “unlicensed spectrum” or “license-exempt” market entry. The rise of Wi-Fi is due, in large part, to the availability of unlicensed spectrum.

Unlicensed spectrum rules allow anyone to operate devices on a designated spectrum band without obtaining a specific authorization, provided that 1) they do not cause harmful interference to others operating in the same or adjacent bands; 2) they operate within range limits; and 3) they operate within certain technical parameters including maximum power outputs. For example, the Federal Communications Commission in the United States opened unused portions of the television broadcasting spectrum, called the “TV white spaces”, for the operation of unlicensed devices, subject to certain limitations. To protect incumbent services against harmful interference, the rules for the TV white spaces require unlicensed devices, which may be for fixed or mobile use, to include geolocation capability, spectrum-sensing technology and the ability to access a database of the incumbent services in order to detect at what frequencies incumbents such as TV broadcasters are using at that location.

When competition was first introduced, the original licenses were hefty documents containing specific details regarding the technology to be used and behavior of a particular licensee. These documents represent the high point of *ex ante* regulation. Gradually the legacy of this practice is being superseded by issuing light-touch, general authorizations that apply across all sectors or in a particular sub-sector or “class.” In some instances, no authorization or formal approval is required. Market entry is unlimited and any regulation that takes place is *ex post* in the context of competition policy. General authorizations are well-suited to activities characterized by rapid technological change and dynamism. Nevertheless, the legacy of the original licensing practices lingers in many jurisdictions.

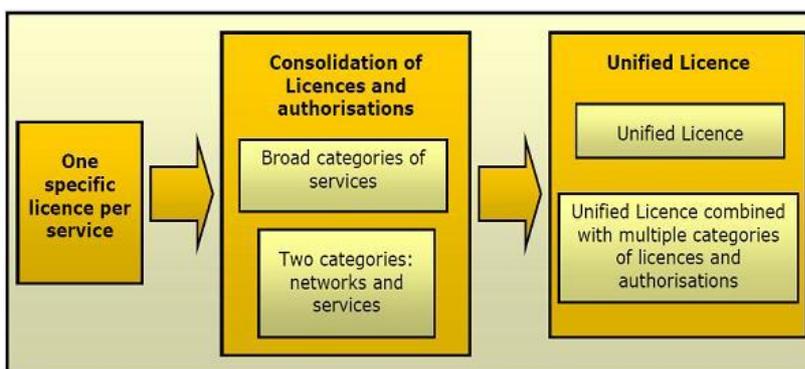
Many of the original service-specific and detailed licenses were issued around the time that the MPTTs and PTTs were being restructured and some assets were being privatized. At the time there was a very limited body of regulation, which led to the license being used as the primary regulatory instrument. Regulators have since implemented and updated a substantial body of regulations, which has eliminated the need to issue particular, detailed and specific authorizations. Instead, regulators can simply refer to the relevant regulations where necessary.

The early authorization methods also had an impact on the fees charged, the legacy of which is still present. Fees are frequently composed of different elements but generally entail an initial component and recurring charges. Many initial fees were established at auctions where particular privileges were for sale, often linked to a scarce national resource. By this means, governments were able to have early access to the future income streams of operators rather than waiting for their tax contributions over the life of the authorization. In the end it is usually the customer who pays the fees of the operator. One way of optimizing consumer welfare and promoting competition is to charge fees that enable the regulator to recover the costs of regulation. This also minimizes the costs of regulation. Though this is regarded as best practice numerous other methods have been adopted that tend to distort the functioning of the market.

Convergence introduces a new set of issues for the authorization agenda. Authorization has tended to follow a process that

allows applicants to provide specific services with specific technologies. In a converged environment, such distinctions become irrelevant. Although service-specific authorizations remain, multi-service authorizations and unified (or global) authorizations are becoming more prevalent. The unified authorizations are technology- and service- neutral and allow licensees to provide all types of services under a single authorization, using any type of communications infrastructure and technology capable of delivering the desired service. Like unified frameworks, multi-service authorizations are also technology-neutral and permit licensees to offer a broad set of services under one authorization. Like the service-specific framework, however, the multi-service authorization still prohibits the licensee from providing certain categories of service, such as television broadcasting.* Further, multi-service authorizations often remain separated into class and individual license categories, which is also similar to the service-specific framework.

In creating a regulatory environment that promotes convergence and NGNs, four inter-related authorization/licensing trends have emerged. These are neutrality, simplification, flexibility and reduction of the administrative burden. Authorizations are increasingly becoming service-neutral and technologically neutral by allowing licensees to offer a wide range of services over the technological infrastructure of the licensee's choice. Frameworks are becoming more simplified through the introduction of unified licenses in which many different service-specific licenses are combined under a single authorization. Unified licenses are appearing in some jurisdictions, such as Kenya, and work in tandem with technology and service neutrality to allow the licensee to use any platform to deliver nearly any service. The shift to a flexible authorization framework helps to attract investment in ICTs, for example, by allowing licensees to provide 3G services over the spectrum bands assigned to them in their 2G authorizations. Finally, regulators can attract investment and encourage competition in the ICT sector by reducing administrative burdens, which is particularly helpful for allowing new entrants to enter the market. Figure 1 below shows the process by which a service-specific licensing regime may be reformed into a unified licensing framework.



◀ Figure 1. Process for Simplification of the Licensing Regime

Clearly, there will be restrictions on the number of licenses issued where resources like the radio spectrum are limited. Consequently, special obligations will continue to be placed on authorizations for scarce resources, as well as for dominant operators or operators with significant market power. However, these obligations should not preclude various arrangements that would facilitate, for example, fixed mobile integration. Existing restrictions on, or unequal treatment of, authorized operators offering similar services may impede convergence. Regulators should reexamine certain policies that discriminate against providers and services, such as rules that allow cable TV operators to enter the voice and data markets, but exclude telecommunications operators from the video market.* GSR 2009 Discussion Paper, Mindel De La Torre, Report from ITU-D Study Group 1, Question 10-2/1 Regulation for Licensing and Authorization of Converging Services at

Reference Documents

- [GSR 2009 Discussion Paper, Report from ITU-D Study Group 1, Question 10-2/1 Regulation for Licensing and Authorization of Converging Services](#)

1.3.2 COMPETITION

Once the authorization process is underway the role of the regulator is to ensure non-discriminatory treatment of all players in the liberalized market. The UN Task Force on Financing ICT has advocated equitable treatment of market players as an essential means towards liberalization by stating: “*The explosion of ICT sector investment in most developing countries correlates closely with an improved environment for private investment to take place and the transformation of formerly closed, monopoly ICT markets to allow competitive entry. Where Governments have actively pursued an open, equitable market environment, investors have generally welcomed the opportunity to compete.*”*

However, at the outset of the liberalization process, the market is unbalanced with the incumbent clearly the dominant, vertically integrated player. It is likely that the tariff structure of the incumbent is unbalanced, where prices charged do not reflect the underlying costs of service provision so that some cross-subsidies are in operation. Market distortions can wrongly discourage or encourage new entrants. For instance, on the one hand, cross-subsidies can artificially decrease the incumbent's costs and allow the incumbent to undercut the newcomer's prices, which leads to under-investment by new entrants. On the other hand, excessively priced international calls, for example, can lead to over-investment by newcomers.

There are numerous ways in which the incumbent can further distort competition (see [Module 2](#) and [Module 6](#)) unless the regulatory authorities take action. These include:

- Failure to deal with the requests of competitors for network interconnection in a timely or serious manner (typical responses are: "it is not technically possible," "it will take a very long time," and "it will be very expensive");
- Charging its retail arm lower fees than those paid by competitors;
- Reducing retail tariffs to a level where new entrants cannot survive;
- Making the sale of one product (to customers or competitors) conditional upon the purchase of a second product;
- Offering discounts to customers who take a combination of products/services;
- Entering agreements with distributors that preclude them from offering the products/services of competitors; and
- Providing low-quality products/services to competitors.

These activities are known as price/margin squeeze, predatory pricing, tying, bundling and exclusive arrangements. Although some of these practices, particularly tying, bundling and exclusive deals, often produce pro-competitive and pro-consumer benefits, these activities may be proscribed in individual authorizations or may be prohibited under the application of *ex post* competition law. In some cases, the competition agency is responsible for the application of competition law. In other cases, the sector-specific regulator has the authority or assumes the powers of the competition agency.

Generally, the focus of ICT regulation is on "essential facilities." New entrants are certain to require some inputs from the incumbent. Some of these inputs cannot be replicated economically or technologically by new entrants and no substitute can be found for them. These are "essential facilities" for new entrants and the "last mile" and interconnection disputes flow from this characteristic. Many of the above activities are prohibited by law or addressed in detailed *ex ante* licenses. There is a large body of analyses, case law and remedies concerning anti-competitive behavior provided in the Toolkit that reflects various jurisdictions.

Regulators also need to promote the interests of consumers since the incumbent can set tariffs above costs where it holds a dominant position (e.g., line rental, local calls, and to some extent national calls) since new entrants initially target the international segment. Baskets, sub-basket and associated price caps have been constructed and linked to rates of inflation* (i.e., Retail Price Index(RPI)/Consumer Price Index (CPI) minus some "X factor") to take account of expected efficiency gains. The impact of these price caps is largely felt by new entrants who can rarely set prices above those of the incumbent. Increasingly sophisticated costing models, such as forward-looking or incremental, with significant information requirements have been developed to improve tariff-setting efficiency. Regulatory tariff setting is much less common in competitive mobile markets, especially where three or more operators have been authorized.

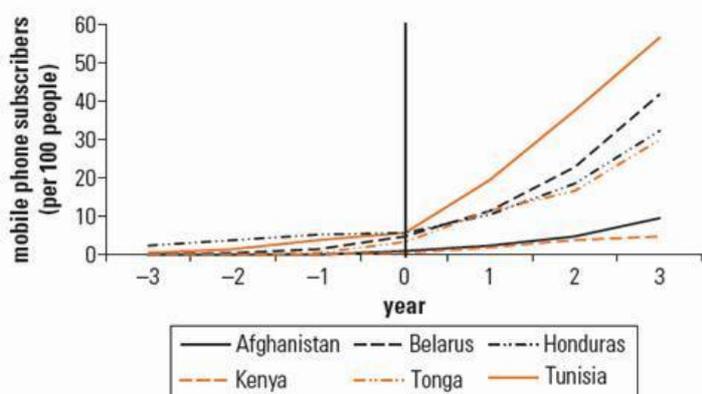
The growing availability of the Internet and broadband are changing the tariff landscape with customers frequently paying for access and not usage. For a flat fee, customers can obtain a broad range of services such as Caller ID, conference calling, and call forwarding, plus unlimited national calls and/or free calls to on-net customers, as well as reduced prices for international calls. These practices are both a challenge to the previous principles of tariff setting and to the business models of incumbents.

Poorer consumers, such as those in South and Southeast Asia, have taken advantage of competition in the broadband market through the rise of prepaid mobile broadband access.* Originally emerging in the budget voice telephony market, prepaid cards are now expanding to mobile broadband access and compete with the "always on" broadband access model. The prepaid mobile broadband market allows poorer consumers, whose incomes are often irregular, to purchase broadband access according to their needs or ability to afford broadband. A necessary condition of this development is the removal or reduction of barriers to entry in the mobile broadband market and protection of competition.

Ultimately, competition leads to the erosion of the dominant positions of incumbents. In these circumstances emphasis shifts from *ex ante* sector specific to *ex post* competition law-based regulation. Simple market share thresholds (e.g., 35 percent) in broadly defined markets have typically been used as a means of identifying a dominant position. However,

competition policy has developed and become more sophisticated. In today's *ex post* regulation, the first step is the "definition of the relevant market."^{*} Where the identified market is considered sufficiently competitive, sector-specific regulation has been lifted. For definitional purposes, markets can be analyzed according to product, geographic location, type of customer, retail, wholesale and time. Market definitions that are too narrow or too broad will fail to accurately identify dominant positions. Certain products in the market display clear signs of dominance, such as call termination on networks and thereby interconnection. For definitional purposes, markets must be analyzed from the point of view of buyers and sellers, particularly in regard to whether a product is a substitute for the one under analysis. Additionally, the presence or absence of barriers to entry (such as essential facilities) is central to defining markets. Once again, there is a substantial body of analyses, methodologies, and *ex post* competition case law reflecting the experience in different jurisdictions in the Toolkit.

The success of competition and private investment is demonstrated in mobile penetration rates in various countries around the world before and after the introduction of competition in the mobile market, as illustrated in the following Figure 1.^{*}



◀ Figure 1: Mobile Telephony Penetration Before and After the Introduction of Competition

◀ Source: ITU, World Telecommunication/ICT Indicators Database

As the above figure shows, the number of mobile subscribers was relatively stagnant until the entrance of a second mobile operator, at which point the number of mobile phone subscribers typically skyrocketed. In Tunisia, for example, fewer than five percent of the population had mobile phones prior to the introduction of competition in 2001. By 2005, the mobile penetration rate jumped to more than 57 out of 100 people and reached a penetration rate of 84.6 percent by end of 2008.^{*} ITU World Telecommunication/ICT Indicators database at .

Note: Year 0 in the figure indicates the year of entry of a second mobile operator.

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Next: 1.4 Interconnection →

The ICT Regulation Toolkit is a joint production of infoDev and the International Telecommunications Union (ITU).



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