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Electronic communications regulation in Europe: An overview of past and future problems

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A B S T R A C T

For many years, electronic communications has been one of the most important areas of policy intervention for the EU. Liberalization and privatization of the telecommunications industry were very important topics of policy debate in the two decades from 1990 to 2010. In these years, the EU developed a sophisticated regulatory framework that aspired to the principle of favoring the entrance of new players in the sector, and characterized by a strong pro-competition flavor. However, more recently the necessity of mobilizing important investments for the creation of new next-generation networks, capable of delivering all the benefits of the digital revolution to European citizens, has cast doubts on the validity of the established framework. This article discusses the solutions adopted during the liberalization process, and summarizes some of the key future challenges to the existing regulatory framework.

1. Introduction

In this article, we provide an overview of the interventions and main issues faced by European telecommunications policy after liberalization of the markets. In particular, we analyze problems connected to four main areas of policy intervention: the fixed telephony market; the mobile telephony market; the Internet; and the single European market goal and the appropriate institutional approach to regulation.

For each area of intervention, we examine the issues that led to the creation and consolidation of the present regulatory framework. In particular, a demand to liberalize the sector from former state monopolies, which was at the heart of the creation of a pro-competitive/pro-entrance approach in Europe, seems to be the main driver of the current regulatory framework. We also look at the situation as it is today: we are now faced with a new set of issues that will affect the future of European telecommunications markets. The main question is how to create the right conditions to spread the economic and social advancements promised by the digital revolution; for example, the conditions needed to encourage investments in next-generation networks (NGN).[1]

The article is organized as follows. Section 1 lists old and new problems in the evolution of the fixed-lines markets after liberalization. Section 2 examines the mobile industry, its rapid evolution, and the present necessity for more band and better spectrum management. Section 3 analyzes the role of the Internet, and of its native companies in relation to, and in conflict with, traditional services and operators in electronic communications. Section 4 deals with the long-term demand for the creation of a single European market, also in relation to the evolution of sector regulation and the need for supranational coordination. A brief conclusion follows.

2. Fixed lines: from service competition to infrastructure competition to NGNs

The starting point of the European telecommunications policy was the concomitance of the necessity of liberalizing and privatizing the state monopolies, in order to unleash the potential of competition and to improve efficiency (Armstrong and Sappington, 2006), in parallel with the objective of creating and sustaining the growth of a common internal market for electronic communications (Ungerer, 2013).[2]

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[1] According to the definition given by the International Telecommunications Union, NGNs are packet-based networks capable of providing telecommunications services to users, incorporating multiple broadband and Quality of Service (QoS)-enabled transport technologies, and in which service-related functions are independent of the underlying transport-related technologies.

[2] For an analysis of the liberalization rationales and processes in Europe at the time, see also the Green Paper on the Liberalization of Telecommunications Infrastructure and Cable Television Networks (COM (94) 440 final).

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The start of the modern phase of European telecommunications policy can be seen with the publication of the Green Paper on the Development of the Common Market for Telecommunications Services and Equipment (COM(87)290), whose purpose was to liberalize the markets in telecommunications-terminal equipment, and provide for the abolition of special or exclusive rights to import, market, connect, bring into service and maintain telecommunications-terminal equipment. This was the first step towards the liberalization of all telecommunications markets, which culminated in the 1990s with two important interventions: the Open Network Provision and the Full Competition Directive.

In 1990, the so-called Open Network Provision (Directive 90/387/EC) determined the liberalization of voice telephony and infrastructures, with the aim of creating the conditions by which to allow other operators to gain access to national telecommunications networks on fair and non-discriminatory terms, and thereby to compete with the established incumbents, while sharing their infrastructure where necessary. The Directive set the rules for open access to the networks of the old monopolies so that the new entrants could offer services in competition – on equal terms – with the ex-monopolies. This objective of opening the sector to competition led to the introduction of asymmetric regulation: ex-monopolies, or incumbent operators, were imposed with obligations that new entrants did not face.

The Open Network Provision laid the basis for the Interconnection Directive (97/33/EC), which provided detailed conditions to ensure the open and efficient interconnection of networks as an instrument to foster competition, both in regard to access and to final services to customers. The Interconnection Directive stated that interconnection charges should follow the principles of transparency and cost orientation, implying, amongst other things, the publication of a reference offer and the obligation to keep separate accounts for wholesale and retail operations for all vertically integrated operators.

In parallel, the introduction of the competition directive (Directive 90/388/EC) and the amending act, called the Full Competition Directive (Directive 96/19/EC), required member states to cease granting special or exclusive rights to national telecommunications operators, as this practice constituted an improper restriction on trade in the internal market. Certain services exempted from the previous Directive 90/388/EC, in recognition of the problems posed by deregulation and the additional time required to find solutions, were finally liberalized. In fact, the main feature of the Full Competition Directive was to require member states to liberalize voice telephony in order to bring to completion the liberalization process of telecommunications services in Europe.

The European access regulation progressively included an obligation to offer an interconnection to incumbents' networks at cost-oriented prices, and a duty to allow access to essential components of the network, especially as key access regulatory instruments. Local loop unbundling (LLU) and bitstream[3] came into the picture with the EC Regulation on Local Loop Unbundling (EC/2887/2000). The latter came into force on January 2, 2001 while an obligation for the incumbent to offer bitstream to entrants when it was already available to its own services was contained in Directive EC/10/98. These rules have since been a milestone for the creation of sustainable competition based on new services, but also (partially) on new infrastructures in the European telecommunications arena.

The whole set of provisions regarding the telecommunications sector before the fundamental 2002 reform is sometimes referred to as the 1998 package, because in 1998 the obligation was imposed on governments to liberalize entry into all their telecommunications markets. The main objective of this set of interventions was to conclude the early stage of market liberalization of the telecommunications sector through the implementation of an asymmetric regulation. This defined the rights of new entrants, imposed restrictions on historical operators to open their network-face infrastructure, and defined Universal Service Obligations in the interest of consumers (Cave and Prosperetti, 2001).

Indeed, the decision to eliminate state monopolies and to sustain the birth and growth of a new liberalized, competitive, and harmonized telecommunications market in Europe introduced the necessity of finding a balance between static and dynamic efficiency. At the beginning of this process, immediately after the liberalization of the markets, it was necessary to create conditions for reaching a workable level of competition by concentrating the regulatory rules on the limitation of market power and the creation of a level playing-field between old and new competitors on the same telecommunications platform. This necessity was due to the fact that there was only one network, which was owned by the incumbent operator, and it was fundamental to concentrate *ex-ante* regulations on achieving service competition downstream, thereby impeding abusive practices by the incumbent.

However, the goal of maximizing static efficiency generally comes into conflict with the need to reach dynamic efficiency: a high level of competition lowers the operators' profits, and therefore their incentive to invest. The objective of the European regulatory intervention was to create competition so that entrants could earn enough expertise, market share and profits to be able to invest in their own network, and eventually reach a situation in which infrastructure competition would become a reality and the most invasive rules could be phased out, particularly regarding mandatory access to elements of the incumbent's network. This idea of using services-based competition as a stepping-stone to infrastructure-based competition has been theorized under the name of "Ladder of Investment" (LOI) theory (Cave, 2006; Cave and Vogelsang, 2003).

In 2002, the European telecommunications regulatory framework was completely revisited to take into account the need for a more flexible, technology-neutral, regulatory setting, required by the rise of the Internet and the convergence between services once offered on different technological platforms. The new regulatory package[4] fully promoted the so-called LOI approach by putting an accent on the formulation and implementation of access policy, not only to challenge the endurance of competitive bottlenecks, but also to foster a gradual move towards infrastructure-based competition. The reform was heavily based on the use of competition policy tools, such as the relevant market definition and the consequent Significant Market Power (SMP) concept, which essentially corresponded to the dominant position in competition law.[5] However, more

[3] LLU is the process by which the incumbent makes its local network (the copper cables that run from customers' premises to the. telephone exchange) available to other companies. Bitstream access refers to the situation in which an incumbent installs technology and modems in the customer's premises, and then makes the access link available to third parties to enable them to provide broadband services to customers. Via bitstream access, the incumbent provides ADSL technology and modems while entrants have no control over the physical line and are not allowed to add other equipment.

[4] The new regulatory package consisted of the Framework Directive (2002/21/EC), the Access Directive (2002/19/EC), the Authorization Directive (2002/20/EC), the Universal Service Directive (2002/22/EC), the Radio Spectrum Decision (676/2002/EC), the Directive on Privacy and Electronic Communications (2002/58/EC) and the Regulation on Unbundling of the Local Loop (2887/2000/EC).

[5] For further explanation on the relevant market and SMP concept in telecommunications regulation, see the (2002/C 165/03) 2002 "Commission guidelines on market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services."

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