

A collection of Essays on

# **COMPETITION AND REGULATION**

## **WITH ASYMMETRIES IN MOBILE**

### **MARKETS**

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**QUANTIFICA**

## An evolving theory

Economists dealing with competition among network operators have long adopted a simplifying operator-symmetry hypothesis in their modellings. In this context, competition selects the most efficient ones and gets rid of the less competitive operators. In this approach, an actor who has not achieved critical size is inefficient. The asymmetry here is “endogenous,” since it is solely attributable to mechanisms internal to the market. Regulation, then, has to be neutral or “symmetrical,” i.e., the same for all, so as not to disturb the advent of a competitive balance that maximises the collective good.

Market reality and theoretical advances are radically changing this view of the world. Once the actors find themselves, by construction, in a situation of asymmetry, for example in the mobile market because of staggered assignment of licenses, a structural imbalance may arise between first movers and later challengers because of the advantages and/or behaviours of the actors in place, which regulation ignores or does not adequately correct. It follows that the challengers’ weak position no longer sanctions its inefficiency. This results in whole or in part from the actual market conditions imposed on it. The asymmetry is no longer endogenous but exogenous. The latecomers who are subjected to it cannot be blamed for it.

In light of these new models, regulation needs to be deliberately asymmetrical and should promote equitable but not equal treatment, so long as the market has not been structurally rebalanced. It is not a simple matter of a period of protection that should be granted to the challengers, but a real assessment of the market conditions that make permanent competition possible.

So regulation should emphasise all measures capable of reducing structural imbalances. The countries that have best succeeded in this area – the United Kingdom, Taiwan, Korea, etc. – have been able to create very asymmetrical regulatory environments and envisioned the end of regulatory asymmetry (“sunset clause”) when the assessment was made that the latecomers were well established in the markets (for example, the criterion of a market share above 20% for each operator in a four-operator market, or above 25% in a three-operator market).

The new economic models thus make it possible to establish criteria for regulation that stimulate competition in infrastructure, which alone is capable of maximising the welfare of consumers.

For the first time, a work brings together some of these new economic considerations, taking an interest in the mechanisms and consequences of exogenous “asymmetries” among operators competing in the mobile phone markets. The work tackles the origin and nature of the advantages enjoyed by first movers, the competitive effects of positive externalities (network and club effects), leverage effects obtained through differentiated pricing for interconnections, etc.

The quality and diversity of the fifteen European and Asian contributors – university researchers or members of regulatory authorities – demonstrate the soundness of the analyses, a soundness praised by Professor Nicolas Curien in the foreword to the work.

The conclusions cite the need for competition in infrastructures maintained by many independent operators, and the virtues as well as the necessity of adopting a shrewd and detailed approach to asymmetrical regulatory measures. Its guidance in setting asymmetrical call termination rates according to the structural balance of the markets is one of its immediate and crucial fields of application.

### **Advantage of the first movers**

Two articles demonstrate that asymmetry among operators is not a result of competition but a phenomenon exogenous to the market. This characteristic is almost a “law”: the greater the temporal difference, the greater the differentials in market share and profitability (Benzoni). This law is a cumulative advantage that benefits operators in place over newly entering operators handicapped by obligations and requirements (coverage, winning subscribers) that will drag down any hope of catching up. The Swiss case (Dewenter) perfectly details the mechanism of these “first mover advantages.” It shows that these advantages are not the result of innovations or greater efficiency but of the ability of the first movers to win over users (switching costs) and to apply pricing policies that encourage on-net calls coupled with long engagement times. This case also illustrates the ability of established operators to promote their brand name, while later operators have greater difficulty convincing customers of the quality of their network. This case emphasizes the need for asymmetrical regulation to compensate for these advantages that have nothing to do with the operator’s efficiency but with the regulator’s excessively naïve laissez-faire approach.

### **Virtues of infrastructure competition**

All in all, these first mover advantages are a real challenge for regulators. Leaders with market power can now consolidate the industry around them. Yet only local challengers are an essential force for maintaining high levels of investment in infrastructure and developing the next generations of services.

Birke and Swann analyse the demand-side effects of networks this way. This work – based on a British case study – reminds us of the importance of these effects both at the global level and also at a restricted level (formation of user “clubs” in social groups or families). If the global network effect is a factor in the emergence of dominant actors (because of the preferential prices on on-net calls), club effects promote the creation of niches, which this work analyses in detail. It also shows their limitation: while offers may target these niches, the scope of the clubs does not make it possible to thwart actors who have first mover advantages by envisaging transfers of major market shares. In other words, the effects of clubs make it possible to better occupy the chinks in the market, whereas the big operators have the power of global network effects. In addition, economic actors wanting to win over niches (MVNO, for example) will not be able to develop an innovative technical infrastructure and will be dependent on the big operators in place.

The article by Cricelli, Grimaldi & Levialedi echoes the preceding one. These authors show that MVNOs, sometimes presented as a panacea to compensate for the market power of the big operators, have to face the “first movers” just as the “challenger” operators do. They thus show that the initial advantages of the first movers are lasting, whatever the entry strategy chosen by the MVNOs. So the “ladder of investment” theory is therefore just an illusion, whereas the MVNOs weaken the challenger operators, hence the competition, more than the leader operators.

Geoffron reminds us of the terms of the alternative: competition in infrastructure vs. competition in services. In the case of the mobile phone market, the additional costs incurred by duplication of infrastructure do not outweigh the benefits of competition in infrastructure. This is the perception of the European Commission. And it is less the relative performances of these two types of competition – *infrastructure vs. services* – that are at issue today than the preservation of an ecosystem that enables both of them to operate.

## **Asymmetry of call termination to correct the asymmetry of positions**

The work includes major developments on the pricing of call termination and its regulation.

Haucap conducts an analysis based on some fifty European operators. While he recommends a single cost-calculation method for all operators, he demonstrates that sustainably maintaining price differences among operators' call terminations must include "exogenous" cost differences: in other words, so long as first mover advantages structure the markets, call terminations of the later entrants must be situated above those of the first movers. These conclusions echo those of Benzoni and Dewenter. These results are corroborated by Kocsis's article, which goes further, demonstrating that, in markets where first mover advantages persist, call termination price differences have to be more than proportional to the cost differences.

Chalopin then offers an application to the French case to determine to what extent regulation of call terminations can be an effective tool for correcting the market's initial asymmetries. Using a digital simulation, he shows that asymmetrical regulation of call terminations enables a late-entering operator to lower its retail prices, and so to compete through prices with no risk of being shut out under the pressure of the first movers, and that this type of regulation is thus an efficient tool for catching up.

Several articles place these issues in the Asian context (Korea, Taiwan), very dynamic markets in terms of penetration rates and innovations.

Chou and Liu analyse how a new entrant (Taiwan Cellular Corp.) caught up with and surpassed the historic operator (Chunghua Telecom) in a context where the penetration rate rose from 7% to 112%. The authors underscore the very positive impact of asymmetrical regulation. They also warn against the formulation of sunset clauses so that asymmetrical regulation does not turn into a search for revenue: an important question, as it is often invoked in Europe to justify "symmetrical" regulation and the rapid convergence of the regulated mobile termination prices for all operators. Obviously one issue for regulators is to set up a good monitoring system to promote and not interrupt an asymmetrical regulation too soon while not prolonging it uselessly. Fu's article is a useful complement to the Taiwanese case, warning against network effects in favour of large-scale operators and their propensity for setting call terminations at an excessively high level.

Finally, the chapter by Kim and Park gives us a look at the choices made by the Korean authorities in the area of asymmetrical regulation. While this question was debated, they show its long-term effects: solid challengers, innovations in services, lower prices, investments in infrastructure, etc., in particular while taking an interest in the asymmetric setting of call terminations, thus corroborating the conclusions of the work's other authors. They show that the Korean authorities are constantly concerned about "asymmetry." For example, portability was established in staggered fashion, with smaller operators being subjected to a waiting period and initially being able to bring the subscribers of the leaders to their own networks, while the leaders were unable to do the same.

That is so very far from the current concerns and leanings of regulation in Europe...

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