

Price Squeeze: Lessons from the Telecom Italia Case

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Abstract

This paper analyses a price squeeze case in the provision of telecommunication services to the Italian Public Administration, in which Telecom Italia, the incumbent company, was condemned for bidding below costs. We develop the analysis of the case highlighting the possible anticompetitive story and the alternative competitive explanation. We then construct a quantitative imputation test to verify the alleged anticompetitive behaviour. The methodological issues and the assumptions needed to implement the test are discussed in detail, showing their link to a precise test of the anticompetitive story. We discuss the reasons why the Antitrust Authority and our views diverge over the evaluation of Telecom Italia bidding. The role of judicial review in cases with complex economic arguments is discussed.

1. Introduction

Case 351 before the Italian Antitrust Authority represents one of the most relevant antitrust procedures in the last few years in Italy. The Statement of Objection claimed that Telecom Italia, the incumbent telecom operator, abused its dominant position in the market of fixed line telecom services. The alleged practices involved a price squeeze in the procurement for the provision of telecom services to the Public Administration and the use of restrictive vertical contracts with the top business clients. The final decision confirmed these allegations, condemning Telecom Italia to a large fine. The first level of Appeal partially overruled the Authority decision and reduced the level of fines while the upper level Appeal confirmed the original allegations.

In this paper we focus on the first allegation, namely that the Telecom Italia tender offer was not replicable by competitors, leading to their exclusion through a price squeeze strategy. The procurement was organized by Consip, a public institution that runs all the procurements for the purchases of the Italian Public Administration. Specifically, in mid 2003 Consip organized a new procurement for the provision of voice, access and data services to the central and local bodies of the Public Administration. Telecom Italia won the tender with an economic offer that was quite below that of the other participant, Albacom.¹ This latter accused Telecom Italia of a bid below costs.

This case offers the opportunity to discuss the antitrust practice on price squeeze cases, that have been quite frequent in Europe in the last years, with landmark cases in Germany and the UK, with a

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¹ Albacom is a medium size telecom company specialized in the provision of business clients. During the preparatory phases of the Consip tender, a third, and much larger, operator, Wind, was competing. Wind withdrew its bid the last day of the tender, with no explanation.

reference to the more general debate on the application of article 82 and the adoption of an economic approach that focuses on the effects of unilateral practices.²

Price squeeze, as predatory pricing, is among the practices that more frequently are treated using quantitative tests to prove the anticompetitive behaviour. In our discussion we aim at showing that quantitative tests are not a shortcut for a detailed specification of a coherent anticompetitive story grounded on economic analysis, that allows to specify in a consistent way the large set of assumptions needed to implement the test.

In the A351 a bid that does not allow an efficient competitor to cover all its incremental costs would expose it, given the large volumes and the long time span of the contract, to serious financial distress. A competitor relying on external finance might get in trouble then, an argument developed in the financial predation theory. Being excluded from such an important provision would limit seriously the ability of new competitors to grow and contest the market position of the incumbent, with an ultimate adverse effect on consumers. In this framework we try to carefully identify how to construct a quantitative test that allows to verify this anticompetitive story and contrast it with an alternative explanation of intense but lawful competition in a procurement.

The rest of the paper is organized as follows. In section 2 we discuss the price tests adopted in evaluating price squeeze practices. In section 3 we apply the imputation test to the Consip case, discussing in detail the choice of an aggregate or a disaggregated test, the construction of forecasts on future costs, the issues involved in constructing the commercial costs from regulatory accounting data and the final decision and the appeal. Concluding remarks follow.

2. Price squeeze and imputation test

Price squeeze practices refer to market situations where an incumbent firm operates in the upstream market in a dominant position and in a downstream market in competition with other firms. These latter have to purchase an essential input from the incumbent in order to provide the final service. In the telecom markets, for instance, the incumbent is in a dominant position in the local loop segment and provides interconnection services to the competitors, that sell voice, access and data services to the final customers. In this setting the incumbent plays the double role of wholesale provider to the other operators and of their competitor in the retail market.

Price squeeze reminds the anticompetitive practices of predatory pricing, where the dominant firm sacrifices short run profits through abnormal price cuts to induce losses in the competitors and drive them out of the market, expecting to recover short run losses with long run profits in a monopolized market.³

With respect to predatory pricing, however, the incumbent can realize this exclusionary strategy through both the wholesale and the retail prices. If the wholesale and/or the retail market is regulated, then the degrees of freedom of the dominant firm are reduced, but still price squeeze practices can remain a relevant option.⁴

² In particular, we try to apply in the discussion the approach developed in Gual et al (2005) based on the analysis of the effects of unilateral practices, on the identification of consumers' harm and on the design of a precise and consistent anticompetitive story.

³ See Motta (2004) and Bolton, Brodley and Riordan (2000).

⁴ See Bouckaert and Verboven (2003).

Since in the Italian telecom markets during the period of the antitrust case the wholesale interconnection services were regulated, while retail prices to the Public Administration were determined through a procurement auction, we'll focus our discussion on the case of regulated upstream market and unregulated retail market.

To identify the relevant elements of analysis, let us introduce the following notation:

- p : incumbent final price (unregulated)
- c_b : incumbent bottleneck unit cost (local loop);
- c_d : incumbent downstream unit cost (backbone network + commercial services);
- c_i : incumbent additional interconnection unit costs to provide access to the competitor;
- c : competitor downstream unit cost (backbone network + commercial services);
- a : access interconnection charge (regulated).

We first introduce the notion of an efficient competitor, and then we discuss a proper test to identify foreclosure of such competitor. Relations to the usual predatory pricing tests and to the efficient component pricing rule are then analyzed.

The total cost of providing the end-to-end service for the incumbent is $c_b + c_d$. Providing the service by a competitor implies efficiency when the total (internal and external) costs of providing the end-to-end service by a vertically disintegrated competitor are not larger than the (internal) costs of providing the service in a vertically integrated architecture by the incumbent:

$$c_b + c_i + c \leq c_b + c_d \quad (1)$$

that can be rewritten as

$$c_d - c \geq c_i \quad (2)$$

In other words, the competitor must be sufficiently more efficient than the incumbent in the downstream activities ($c_d - c$) to compensate the additional interconnection costs c_i arising from a disintegrated architecture. The threshold downstream cost level that guarantees an efficient competitor is

$$c^e = c_d - c_i \quad (3)$$

We define in the following c^e as the "efficient competitor", that is, an entrant whose retail unit costs are (not larger than) c^e .

Notice that the competitor (who runs only the downstream activities) is efficient as long as its downstream costs are sufficiently low. The network costs or access charges for the upstream bottleneck do not enter into the definition of an efficient competitor. In this sense, we may have a competitor that is efficient (downstream) but whose total costs are higher than the incumbent's if, for instance, the access charge a is higher than the network costs c_b .

Since the entrant pays a for access, it will enter (undercutting the incumbent price p) as long as the incumbent price is not lower than the entrant's total unit costs:

$$p \geq a + c \quad (4)$$

Then we can define a threshold margin that does not foreclose an efficient competitor:

$$(p - a) = c^e = c_d - c_i \quad (5)$$

This is the well known imputation test: notice that this test sets a threshold in terms of margins over the access charge. According to the economic and regulatory environment, it can be translated into a price threshold given the access charge, or into an access charge threshold given the final price. In all cases, if the test is met, an "efficient competitor" c^e can enter, slightly undercut the incumbent price p and make non negative profits providing the service through a disaggregated architecture.

When the final market is unregulated while the wholesale market is regulated, as it is in the case discussed, an exclusionary pricing strategy by the incumbent can be realized by setting a sufficiently low final price p given the regulated access price a . Foreclosing the market by setting a sufficiently low final price reminds the standard predatory pricing. Applying the usual threshold test for predation referred to the incumbent's costs we would obtain in this case:

$$p^{pp} = c_b + c_d \quad (6)$$

When a is regulated and p is set by firms, the imputation test can be written as a threshold on the final price p given the access charge a :

$$p^{imp} = a + c_d - c_i \quad (7)$$

Notice that in constructing the price threshold for the imputation test p^{imp} the relevant data are the regulated access price a and the incumbent's downstream (c_d) and interconnection (c_i) costs. As in the standard predatory pricing tests, it is the incumbent's cost figures that are used as a benchmark to identify the efficient competitor. The only difference in this case is that the incumbent network costs are replaced with the access charge that the entrant pays for bottleneck services.

Then it is interesting to verify under which conditions the two tests provide the same threshold, i.e. when $p^{pp} = p^{imp}$. Under cost oriented regulation:

$$a = a^{co} = c_b + c_i \quad (8)$$

i.e. the access charge fully covers the costs of interconnections of the competitor; in this case the usual predatory pricing test is equivalent to the imputation test, in the sense that the two expressions identify the same threshold.

When $a > c_b + c_i$, the predatory pricing and the imputation test diverge: $p^{imp} > p^{pp}$. In this case the threshold defined through the imputation test is higher than the predatory pricing threshold since the higher access charge a allows to block entry of an efficient competitor c^e with a price higher than the incumbent unit costs $c_b + c_d$. The incumbent would be able to prevent entry by setting $p \leq p^{imp}$. However, if we apply the standard predatory pricing threshold, we would conclude that no predation is at work: in fact we would observe $p^{pp} < p \leq p^{imp}$ and we were unable to identify foreclosure (through margin squeeze) since the predatory pricing test would be passed. Hence, the imputation test guarantees to identify foreclosure even when regulation is not set according to full cost recovery.

In summary, an efficient competitor balances the extra costs of interconnection with lower downstream costs. When the competitor pays access charge a , it will enter if $p \geq p^{imp} = a + c_d - c_i$, according to the logic of the imputation test. This threshold depends on the level of the access

charge a . If the access charge is cost oriented ($a = a^{co} = c_b + c_i$), the imputation test defines the same threshold as a traditional predatory pricing test $p \geq p^{pp} = c_b + c_d$. In all the other cases, using the predatory pricing threshold p^{pp} instead of the imputation test threshold p^{imp} would not allow to uncover foreclosure.

The imputation test reminds the logic of the efficient component pricing rule (ECPR) proposed by Baumol and Sidak to price access.⁵ The access price should compensate the access providers of all the direct costs of access and of the opportunity costs of the business displaced by the competitors. While in general the imputation test simply identifies a threshold margin $p-a$, the ECPR is intended to set an access charge a given the final price p : hence, the ECPR solves the imputation test endogenizing a for given p . From the definition of the ECPR:

$$a = a^{ecpr} = c_b + c_i + (p - c_b + c_d) \quad (9)$$

Rearranging this expression, we obtain the same margin threshold of the imputation test:

$$(p - a) = c_d - c_i = c^e \quad (10)$$

The economic implications of the ECPR, in fact, are similar to those of the imputation test: an "efficient competitor" c^e can profitably enter, undercutting the incumbent price p , when paying the access charge a^{ecpr} . In fact, the competitor's profits when undercutting p are

$$p - a^{ecpr} - c = c_d - c_i - c \quad (11)$$

that are non negative only if

$$c \leq c_d - c_i \quad (12)$$

our definition of an efficient competitor c^e .

Notice also that when the incumbent sets $p = p^{pp}$ to prevent entry, $p - c_b + c_d = 0$ and therefore the ECPR is equivalent to the cost oriented access charge, i.e. $a^{co} = a^{ecpr}$. Hence, even in this case the consistency of the imputation test threshold (equal to the predatory pricing threshold) and the ECPR (equal to the cost oriented regulation) is maintained.

Identifying a price squeeze practice requires to construct a quantitative test along the lines of the imputation test to distinguish abusive pricing from normal price competition. This is not a purely technical issue. We shall argue in the paper, discussing the Telecom Italia case, that the implementation of the test requires to set several elements, choosing among many alternative solutions, that reflect the underlying assumptions to be made coherent with an overall anticompetitive story. Put another way, the quantitative price test is the final screening device that the analysis specifies to distinguish between an anticompetitive explanation ("the anticompetitive story") and an alternative reading of the data that may be consistent with intense but lawful competition. At each step in constructing the test subtle methodological issues are involved and they have to be set according to the overall logic of the underlying anticompetitive story.

In the A351 case, the Italian Antitrust authority has adopted the imputation test approach $p^{imp} = a + c_d - c_i$ to evaluate the Consip procurement and in particular the winning offer by Telecom Italia. Although we agree that the general approach followed by the Authority is correct, we claim that

⁵ Baumol and Sidak (1994).

many details in the implementation and evaluation of the test remain to be settled. And we argue that in its implementation the Authority failed to stick on a consistent anticompetitive story, leading to unconvincing conclusions. In the next paragraph we enter into the details of the case to better highlight this analysis.

3. Applying the imputation test: the Consip procurement.

The Consip procurement required the participants to tender their bids regarding a wide set of (voice, access and data) telecom services on the fixed wire lines. The winning offer would have represented the general contractual framework for the central and local public administrations to sign contracts with the winning party according to the prices and technical features of the bid. The time horizon for these contracts was of 30 months after the assignment of the procurement.

First of all, the very long period of the provision and the volumes of traffic and lines involved would require any participant at least to break even. In other words, the price floor that has to be identified needs to cover all the total average or long run incremental costs to serve the Italian Public Administration according to the protocol of the procurement.

All the arguments that in predatory pricing are invoked to justify a price above the average variable or short run incremental cost but below the average total or long run incremental costs seem not to apply in this case. No introductory offer and promotions are relevant for a framework contract that has to be subscribed by all the Public Administrations; no learning effects on costs are conceivable, since the preliminary technical screening on all participant had to verify their technical ability to provide the services required; no temporary loss in demand (and temporary increase in unit costs) might be claimed, since the proposals were evaluated at the foreseen volumes indicated in the procurement protocol.

Hence, the full incremental costs should be recovered through the bid price, self-financing the provision of services. Any price below that threshold but above some measure of average variable or short run incremental costs would leave the provider for a long time with such losses to put its financial stability in trouble. The competitors of Telecom Italia in the Consip tender were new entrants with no possibility of self-financing large losses with margins from other lines of business. Moreover, being in most cases new operators involved in a start up phase of construction of their own facilities, they were already financially indebted. Hence reliance on external finance was a delicate issue for the competitors, and losses in the provision of services to the Public Administration would have created serious troubles. In this sense, the proper notion of predation that we think relevant in the present case is that of financial predation: a price by the incumbent would be replicable if an efficient competitor would be able to match it without cumulating financial losses. And an exclusionary strategy in this setting would exploit the large financial losses that a competitor would experience by pricing below its costs, with a restriction in external financing and the prospect to go bankrupt.⁶

The specific rules for the Consip procurement are important to evaluate the features of competition and the constraints on the strategies of the participants, calibrating the imputation test to the specific anticompetitive story alleged.

⁶ See Bolton, Brodley and Riordan (2000) and Bolton and Schafstein (1990) on financial predation.

Given this general point, we then focus on three main elements.

- The procurement was designed to select the more convenient provision of a full range of services to the Public Administration. A preliminary point is therefore whether replicability should be assessed service by service or on the entire bundle of services required. In other words, whether a disaggregated or aggregate imputation test should be implemented.
- The 30 months time span of the provision required the participants to form expectation on the future evolution of costs. The imputation test therefore requires to approximate the information available to an efficient competitor to form these expectations.

Implementing the imputation test requires to construct precise measures of what we call the "efficient competitor". Since the notion of efficiency is not an absolute one, but it is referred to the benchmark of the incumbent, a natural reference is to look at the costs of the incumbent, properly adapted to account for the different productive architecture of the competitor. Regulatory accounting imposed on the incumbent offers therefore a very detailed and useful starting point to construct a measure of the "efficient competitor" costs. The third methodological point that will deserve attention is therefore:

- How to obtain an estimate of the "efficient competitor" retailer costs c_d and of the diseconomies of vertical disintegration c_i starting from the data of the incumbent regulatory accounting.

We'll discuss the three issues in the next subsections.

3.1 Aggregate vs disaggregated imputation test

Opting for an aggregate or a service by service test requires to refer to the general motivation of our analysis. We are, indeed, asking if setting a price, or a set of prices, at a given level enables the incumbent to exclude an efficient competitor from tendering a competitive offer for that or those services. In general we may conceive that the incumbent can design selective exclusionary practices that prevent the other firms from competing on significant portions of the market; if the competitor has to cover sunk common costs, such selective exclusionary strategy may successfully deter entry even in the whole market. However, this anticompetitive story has to be evaluated according to the precise rules of the Consip procurement in our case.

To be more specific, if the rules of the procurement allowed the participants to submit partial bids for subsets of services, assigning the provision to the best offer service by service, selective exclusionary strategies might be successful. In this case, therefore, a service by service imputation test should be run to verify if such strategies were adopted by the incumbent. The appropriate check would be therefore conducted for each service $j=1, \dots, n$ using the incumbent bids p^j :

$$p^j \geq a^j + c_i^j - c_i^j \quad (13)$$

If instead the rules required to evaluate the overall tender offer on the whole bundle of services, assigning the provision to the more convenient global offer and dropping partial offers, no selective exclusion might be implemented. If the overall revenues of the incumbent, evaluated at the single prices of the different services and by the volumes indicated in the procurement protocol, cover the overall costs of an efficient competitor, then no exclusion might be claimed. If, instead, total revenues do not cover total costs of an efficient competitor, this latter would be excluded from the

provision of all the services required. In case of an aggregate test, therefore, the proper check would be performed using the incumbent overall revenues and the quantities q^j specified in the procurement protocol for each service j :

$$\sum p^j q^j \geq \sum (a^j + c^j_i - c^j_i) q^j \quad (14)$$

Under these rules, therefore, only an aggregate test would be needed and justified. Suppose indeed that the incumbent bid entails cross subsidies among subsets of services, some of which are priced below cost while others have a positive margin. This bid would have no exclusionary effect as long as the whole bundle is replicable: if the incumbent prices entail an aggregate margin of revenues over costs, an efficient competitor would be able to beat the incumbent bid (even designing an offer that covers the costs service by service) by slightly reducing (some) prices and total revenues. Hence, if the rules prescribe an aggregate evaluation of the bids, no selective exclusion is feasible, cross subsidies have no anticompetitive bite and an aggregate test is all that matters.

The rules of the Consip procurement required to submit a bid covering all the services and specifying the individual prices. Any partial or incomplete offer was excluded by default. We conclude that no selective exclusionary practice would be feasible and therefore only an aggregate imputation test has to be run: the only anticompetitive story conceivable involves an exclusion from the overall procurement through a bid whose aggregate revenues do not cover the aggregate costs of an efficient competitor.

The Antitrust Authority has repeatedly contested this approach during the investigation, issuing the Statement of Objection and in the final decision. The arguments initially put forward by the Authority have been reduced along the process to a single relevant motivation, that we discuss here in detail.⁷ The general rules set by the law on Consip and its competences state that while the central and larger administrations and the ministries are compelled to adhere to the contracts selected by Consip, the smaller administrative bodies and the local administrations have the possibility to open new and secondary procurements for specific services covered by a Consip contract, using the corresponding bid as the base price in the new procurement. Hence, for instance, a central body of the Public Administration had to subscribe a contract for all the voice, access and data fixed line services according to the conditions of the winning bid, while a small city council had the opportunity to run a local tender for the provision of, say, voice services, using the corresponding prices of the winning bid in the general tender as the base price in its secondary procurement.

The Antitrust Authority concluded that pricing a specific service below cost would have foreclosed the competitors from subsequent local procurements even if the overall bid were replicable and non exclusionary in the main national procurement. If a service were priced below cost, a new secondary tender for that service had to fix the base price at this level, too low to allow a successful and profitable bid by competitors. A service by service test was therefore recommended by the Authority, to avoid exclusionary strategies in these secondary tenders.

⁷The tender offer by Telecom Italia presented a service, fixed to mobile terminations, that was clearly below costs. Hence, a disaggregated test would have led immediately to the conclusion that at least in one relevant case price squeeze had occurred.

The argument of the Authority is smart and theoretically relevant. However, it fails to consider a crucial point. The ability to organize secondary tenders for subsets of services was given by the norm only to the smaller administrative bodies.⁸

In the case of telecom services, this means that the institutions entitled to reopen secondary procurements were also those characterized by lower volumes of traffic and simpler technical needs. Hence, as long as scale and scope economies are relevant in many of the services offered, we would expect the unit incremental costs for the provision of those services to small public administrations, $\underline{a}^j + \underline{c}_i^j - \underline{c}_i^j$, to be higher than those referred to the volumes of the Consip tender, $a^j + c_i^j - c_i^j$, that average out large and small administrative bodies.

In this case, the argument of the Authority would lead to a paradoxical conclusion: if the winning bid in the primary procurement has to leave open the possibility of successful secondary procurements run by the local administrations for individual services, the proper imputation test should be

$$p^j \geq \underline{a}^j + \underline{c}_i^j - \underline{c}_i^j \quad \text{for all } j=1, \dots, n, \quad (15)$$

that is, a disaggregated imputation test run using the unit incremental costs for the provision of services to the smaller local administrations. This criterion is clearly inefficient, as it imposes a higher threshold and determines higher prices for all the administrative bodies, included the central ones that have to subscribe the terms of the primary procurement. To avoid this undesirable effect, the Authority, in its decision, used instead a disaggregated test $p^j \geq a^j + c_i^j - c_i^j$ based on the unit incremental costs referred to the average volumes of the Consip tender. It is evident that, when using this imputation test, it may clearly happen that

$$\underline{a}^j + \underline{c}_i^j - \underline{c}_i^j \geq p^j \geq a^j + c_i^j - c_i^j \quad \text{for all } j=1, \dots, n \quad (16)$$

In this case, the winning bid would pass the proposed price squeeze test but no secondary procurement would be organized, since the base price would be lower than the costs for providing the local administrations.⁹

In other words, the announced argument that suggests to run a disaggregated imputation test, namely the possibility of secondary procurements by the local administrations, is not guaranteed by the test adopted by the Authority. Even if all the services were priced above cost in the national Consip tender, it would be very difficult to beat those bids in a local tender for smaller volumes of traffic. Put another way, although the local administration were free to organize secondary tenders, they were the same that benefit from the centralization of the selection process through national procurements, being unable to receive more convenient offers in local tenders.

The claim of the Authority that secondary tenders should not be foreclosed is therefore purely theoretical given the restriction of the norm, and the conclusion that a service by service imputation

⁸The political motivation for this feature of the norm is due to the desire to balance the strong centralization in the purchases of the Public Administration implemented through the creation of a central body, Consip, with some degree of freedom left to the peripheral administrative bodies.

⁹ Suppose, for instance, that the access price for a given service is 4 €cent, and that the unit cost of retail services computed on the average of the Consip volumes is 5 €cent, such that a price of 9.5 €cent for that service in the general Consip tender would be replicable. If, however, due to lower volumes, the unit retail costs to provide a small city council is 8 €cent, no competitor would participate in a local tender that fixes at 9.5€cent > 12 €cent the base price.

test should be run is inconsequential, because even passing such disaggregated test would not secure that secondary tenders were economically viable.¹⁰

We conclude that regarding the first of the three methodological points, a consistent exclusionary story within the rules of the Consip procurement would require only to run an aggregate imputation test.

3.2 Forecasting the cost patterns over time

We already mentioned that the procurement rules set a time horizon of 30 months over which the winning prices will be applied to the provision contracts of the Public Administrations. The replicability test has therefore to be run comparing the revenues over this period with the corresponding costs. In other words, since the participants were committed to set the winning prices for the entire period, an imputation test needs to compare the (discounted) stream of expected revenues and incremental costs.

Given the relevant cost reduction patterns that we observe in many telecommunication services, driven by the fall in hardware components and technological innovations, a forecast on the evolution of costs along the period of the provision was crucial. On this issue the Antitrust Authority has claimed that Telecom Italia, that won the previous Consip tender in 2000 and that was dominant in the interconnection services, had an informative advantage over the competitors in forecasting future costs. This rather general and vague statement led initially the Authority to refuse any cost reduction over time in the implementation of the imputation test, based on the argument that competitors were not able to form any expectation on the matter.

This extreme position was then abandoned during the case, and a more balanced view on this issue was reached through an intense discussion with the parties. Our view is that a clear distinction should be made among difference pieces of information and the associated forecasts. The information that Telecom Italia gathered during its provision to the Public Administration in the period 2000-2003 on traffic volumes, technical solutions adopted, etc, were to a large extent available also to Consip, that coordinated the users of these services. Hence, it was in Consip's interest to spell out all these information in the procurement protocol, establishing a symmetric information of Telecom Italia and the competitors on these issues.

When instead we look at the possible informative advantages of Telecom Italia as a vertically integrated operator, regarding for instance the evolution of network costs, this differential information cannot be eliminated by the organizer of the procurement, and constitutes a relevant point in favour of the incumbent. Having said that, we argue that also the competitors have a certain ability to form expectations on the evolution of costs. Analysts of telecommunication markets, the indirect evidence that the regulatory authorities convey when they set the parameters of network caps, all these elements allow to restrict the range of possible values in the evolution of costs.

Hence, we conclude that even an efficient competitor is able to form some range of scenarios regarding future costs, using them in estimating the overall cost of the provision over the 30 months period. Moving to the implementation of this claim, all the forecasts in the reduction of costs should be justified referring to public information and not to the differential information of the incumbent.

¹⁰ To stretch the argument at most, if a national procurement is replicable but entail cross subsidies, such that some services are priced below costs while others are priced with a margin, those latter would be the only one that potentially might be open to successful secondary bids. If the base price is sufficiently high, even a local procurement might induce lower bids. Hence, in a sense if the concern is to prevent foreclosure of secondary bids, cross subsidies in the national tender should be welcome!

Moreover, it seems reasonable to run the imputation test using a grid of different values, rather than single point estimates, for the annual percentage reductions in the different cost elements, to better approximate the uncertainty that the competitor faces when constructing its own forecasts.

3.3 From regulatory accounting to the costs of an efficient competitor

The aim of the imputation test is to evaluate whether the revenues obtained by matching the price(s) of the incumbent cover the incremental costs of an efficient competitor. This latter purchases interconnection (local loop) services from the incumbent, uses its own (backbone) network and provides commercial services to the clients. Let us consider these three elements of costs in detail.

Interconnection services are purchased at the regulated access price, that are therefore the reference value for the interconnection costs. As we already claimed, the way the regulated access tariff is constructed by the regulator, using historical full costs, or long run incremental cost or any other methodology, is irrelevant when we run the imputation test. In any case, for the use of the bottleneck the competitor pays the regulated access tariff, that represents its incremental cost. If the access charge is higher than the bottleneck network costs, the price squeeze threshold increases with respect to a standard predatory pricing threshold, but the condition set by the test still ensures that a competitor efficient (in the downstream activities) can enter.

The notion of an efficient competitor has still a role even in this case: telecom services are, in fact, managed using portions of the incumbent network and segments of the competitor network. The level of interconnection can occur at different stages, and an efficient architecture requires the competitor to connect at the lower level and through unbundling of the local loop (ULL), rather than by carrier pre-selection (CPS). Hence, although the interconnection prices have to be simply taken from regulated access tariffs, the level and mode of interconnection should obey to efficiency arguments.

In the A351 case, at the moment of the procurement in mid 2003 the implementation of ULL was in an initial phase, in which the incumbent was preparing the facilities in its local stations and the competitors were realizing their own investments to connect to the local loop in those locations. The procurement protocol indicated the local stations that should be interconnected in ULL and left 18 months to realize in those sites the complete migration to ULL in case a competitor would win the tender.¹¹ Given this time window, however, an efficient competitor would have the incentives to realize its migration to ULL in a shorter period, being interconnection in CPS more costly.

At the time of the Consip procurement (mid 2003), Telecom Italia had already realized its own investment in 98% of the local stations involved in the Consip service plan; migration to ULL depended therefore on the competitor completing its own investment in facilities at the local stations. A reasonable migration path was referred to a range between 3 and 9 months.

Summing up, interconnection costs a of an efficient competitor should be constructed using the regulated access tariffs for the use of bottleneck components and assuming interconnection in ULL completely realized in a 3-9 months period.

The second element to be specified refers to the diseconomies from vertical disintegration that a competitor should experience in the interconnection, the term c_i in the test. The Authority and the parties agreed to identify this element with the cost of the second interconnection kit that is needed

¹¹ Once completed the process, around 50% of the traffic would have been realized in ULL, while the remaining had to be run under CPS.

when the lower portion of the network is connected to the backbone network of the competitor, and that is not needed in case of an integrated architecture. This element of the competitor costs was not included in the computation of its total incremental costs, according to the arguments put forward above.

The third element of the imputation test is the downstream cost c_d , that includes the backbone network cost of the competitor and commercial costs. In the A351 case the Authority and the parties were able to obtain data on the competitor's backbone network from a document of the competitor published by the regulatory Authority. Hence, no approximation of the backbone network costs, as for instance that of drawing from the corresponding cost components of the incumbent network, was needed.

Commercial unit costs are the remaining element that is to be computed to run the imputation test. The useful reference is to regulatory accounting of the incumbent, where marketing, billing and customer care costs are recorded. Regulatory accounting gives an average picture of the incumbent costs for the provision of a very heterogeneous population of clients, with different needs, locations and volumes of traffic. Hence, a detailed inspection of the different elements is needed to avoid an overestimate of commercial unit costs for the provision of the Consip clientele.

Two issues are relevant under this respect. First, some cost elements, such as marketing, billing and customer care costs¹², are lower with respect to the average Telecom Italia client: no marketing effort is needed since actively Consip promotes the subscription of the framework contract by the Public Administration bodies; electronic billing was already in place during the previous 2000-2003 Consip contract; customer care was eased by the location of the potential clients. These arguments bring us to lower, and in some cases to eliminate, some cost items that enter at the numerator in the unit commercial costs measure.

Second, we have to take into account that some of these commercial services present relevant indivisibilities, and economies of scale in their provision occur when the traffic volumes are larger than the average Telecom Italia client, and in the case of the Public Administration. Economies of scale suggest a further reduction in unit commercial costs with respect to the original regulatory accounting data.

3.4 The decision and the judicial review phase

The reader still alive after this detailed discussion of cost measures realizes that a wide set of assumptions and quantitative scenarios are needed to implement the imputation test. At each step, knowledge of the technical features and a clear and consistent reference to the logic of the exercise are needed. During the A351 case a frequent and fruitful interaction between the case handlers and the parties helped to bridge the gap of the different views, converging in the end to a common and shared set of methodological assumptions and procedures, although the Authority considered also a service by service test and not only an aggregate check.

The quantitative conclusions that the Authority validated in its final decision implied a loss in the aggregate replicability test: total revenues were short of total incremental costs by 3,16 million € (0,6% of total revenues). This result, together with the fact that in a service by service imputation test some items were not replicable, led the Authority to conclude that the Telecom Italia tender

¹² Overhead costs not directly linked to the provision of the services have to be dropped under an incremental cost approach.

offer was not replicable both at the disaggregated and aggregate level, condemning the company to a very high fine (more than 150 million €).

In the two appeals at the Regional Administrative tribunal and at the Supreme Administrative tribunal the courts did not enter in detail into the analysis of the Antitrust Authority, claiming that a sufficiently deep inspection was done in the lower judgement, and confirming the price squeeze allegation.

The final judgement is based on the evidence from the disaggregated test, that in our view is irrelevant in evaluating a price squeeze exclusionary practise in this setting, and on the failure to pass the aggregate imputation test, the only relevant one.

On this latter point, the computations run by Telecom Italia on the same set of assumptions adopted by the Authority gave a margin of more than 3 million €, passing the test. The difference in the two computations, that leads to dramatically different conclusions, is entirely due to a single component, the multi-conference services. The authority overestimated the true costs of this service by 6.5 million € assuming a dial-out mode (that requires to impute traffic costs) instead of the dial-in mode (with no further traffic cost) that Telecom Italia provided. A simple inspection of the Telecom Italia technical report submitted with its bid would have amended this error, leading to the conclusion that the aggregate imputation test was passed.

This observation leads us to briefly comment on the judicial review process in this case. The case A351 has been very long and complex, with frequent and very useful interactions of the case handlers with the legal and economic consultants of the parties. The replicability analysis, in particular, has been performed at a very detailed level, and represented a step forward in the role of economic analysis in price squeeze cases in the Italian jurisprudence. The convergence in the sets of assumptions adopted by the case handlers and the economic consultants of Telecom Italia witnesses that rooting technical details into a consistent anticompetitive story offers a common ground where the discussion can be developed.

Different views remained on the relevance of a service by service test, a complex economic issue that we debated in this paper, and on the quantitative conclusions of the aggregate imputation test, due to a material error of the Authority in computing a single cost component. The judicial review in the two upper levels decided not to enter into these issues, claiming that the Authority run a sufficiently careful and detailed quantitative analysis. While the aggregate vs. service by service test is truly a complex issue that goes beyond the pure evaluation of the procedural and formal elements considered in the appeal review, the material error on multi-conference costs seems the typical textbook example where an appeal overrule is feasible.

Our impression is that while case A351 represented an opportunity for a more relevant role of economic arguments in spelling out a detailed anticompetitive story and in implementing consistently the quantitative test, the judicial review failed to maintain the same standard. This case shows that it is crucial that economic arguments remain still under scrutiny in the phase of judicial review. If this is not the case, the effort of a detailed economic analysis by the Authority is considered as sufficient to confirm its conclusions in the appeal, without coming back and check for possible errors and incoherencies. But effort does not preclude errors, as case A351 shows.

4. Conclusions

The A351 case on price squeeze offers an interesting example to discuss the application of article 82 according to an effect based approach. Price squeeze cases, as predatory pricing, are currently

treated in antitrust practice focussing as a first screening device on a quantitative test that compares revenues and costs. A wide discussion in the literature and in the practice has led to refinements in the correct measures of costs and revenues; in this paper we have shown how the notion of a (downstream) efficient competitor can be defined in a price squeeze test, and how a price/cost comparison can be constructed, according to the notion of the imputation test, to verify if the price of the (vertically integrated) incumbent can be replicated by a (vertically disaggregated) efficient competitor.

Price squeeze (and predatory pricing) cases, based on a quantitative test and a detailed analysis of costs, might be welcome as the desirable benchmark in the application of article 82: sound economic analysis leads to predictable investigation procedures and quantitative tests. While we agree on these features of the practice, our discussion should have highlighted that even in these examples handling a case cannot be limited to a standardized set of steps, and quantitative tests do not crowd economic analysis out. The implementation of the analysis, in fact, cannot be done without fully developing a possible anticompetitive story that fits the case. And each step in the construction of the test requires consistency with the anticompetitive story.

In the A351 case, we argued that the notion of financial predation should be the appropriate one, since the dimension of the bid and the time length of the provision of services would have exposed to significant financial distress in case of an offer below cost. Hence, an imputation test that compares revenues and long run incremental costs should be the proper one. Secondly, replicability may be assessed service by service or at the aggregate level: we have to choose between a selective exclusionary practice or foreclosure from the provision of the entire bundle of services as the proper anticompetitive story. We argued that, within the rules of the Consip tender, only exclusion from the provision of all the services may be a feasible anticompetitive strategy, and therefore an aggregate test should be the correct one. Finally, the notion of an efficient competitor must be spelled out in details when the cost figures are computed starting from the available regulatory accounting data of the incumbent. All these steps can be run according to different assumptions and techniques. The underlying anticompetitive story, however, offers in our view a sound and clear reference in all these steps, allowing to select among the alternatives the one that better fits the exclusionary practice that must be proved.

Hence, our discussion of the A351 case offers an example of an effect-based approach to price squeeze and suggests that economic analysis can improve the consistency, and therefore, hopefully, the predictability, of the antitrust intervention on unilateral practices.

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