

ETNO Reflection Document on Termination Rates

Introduction

ETNO understands that the Commission has carried out an in-depth analysis of termination rates (TR) regulation under the EU regulatory framework and will soon publish a draft Recommendation on TR regulation. ETNO fully acknowledges the role of the Commission in addressing implementation issues with an internal market dimension under the framework. Termination rates regulation has been very much in the focus of the regulatory debate in recent months and a number of national regulatory authorities have taken detailed and comprehensive regulatory decisions, showing a general trend of converging MTRs between Member States, in many cases accompanied by a lowering of these rates.

In the following, ETNO addresses and substantiates its concern that any disruptive approach to TR regulation – be it in principal or de facto - would not be justified by market developments. It could have a serious negative impact on the sector, on market players and ultimately on consumers. To this end, the paper highlights some of the specific economic issues around FTR and MTR regulation.

Summary

Disruption of TR regulation would jeopardise the ability of fixed and mobile operators to address today's challenges:

Over the last decade, considerable work has been invested by operators and regulators to develop and implement TR regulation. This has led to a set of accepted regulatory practices on which business is based and which should not be disrupted. The experience gained during this period should be integrated in the future Recommendation.

Regulating termination rates should be done in relation to today's main challenge which is the take-off of mobile data services as a complement and not as a substitute to mobile voice service. Disruptive TR regulation could seriously jeopardise the ability of the market to tackle this challenge.

The recommended scope of relevant costs to regulate termination rates should correspond to Long Run Average Incremental Costs, as it is already the case today. In the case of mobile networks and services, all network costs including coverage costs are traffic related, which is not the case for the fixed network. Concerning voice-data mobile cost allocation, the scope of voice incremental cost is much larger than the scope of data incremental costs when cost drivers are analysed in detail. Common voice-data costs should be allocated in function of demand characteristics, which means today to voice services.

The reference efficient operator must be defined per country. It should integrate dimensioning and cost parameters as observed in real networks.

I. Disruption of TR regulation would be an irresponsible move which would jeopardise the ability of fixed and mobile markets to tackle today's challenge ⁱ

I.1. The considerable work dedicated in the past to TR regulation has led to accepted regulatory practices which should not be disrupted

- **FTR regulation record**

Concerning FTR and more generally fixed interconnection (carrier selection included), cost calculation and regulated prices have been thoroughly studied, theoretically and empirically, about ten years ago.

The concept and practice, the relevance and calculation method of Long Run Average Incremental Costs, the merits of different depreciation schemes, the respective relevance of top-down and of bottom-up models, of efficiency adjustments, etc. have all been analysed and discussed in detail. The reason for these analyses was that there was a strong concern by regulators at the time about the efficiency of the incurred costs of incumbent operators which were still then very close to public monopolies.

In that process, regulators have learned that purely theoretical greenfield bottom-up models were not an economic panacea and that correct cost modelling of incumbent operators' networks needed to take into account actual observations such the actual nodes of the incumbent network, observed utilisation characteristics, accounting operating and support costs etc... This work on network cost modelling has led to the current practice of regulatory costing of fixed incumbent networks. Current practice has been taken from both top-down (e.g. for operating and support costs) and bottom-up (e.g. for direct capital costs) approaches, from the observation of actual network configurations and from the evaluation of existing capacities at replacement values. Criticism brought against the perceived 'arbitrary' nature of accounting models has been largely dismissed.

On the market, the regulated interconnection rates for termination and for carrier selection have clearly reached their objectives: a competitive telephone

retail market with low prices. The recent Recommendation of the Commission on relevant markets has acknowledged this result.

Obviously, a Recommendation on cost accounting has to build on this experience. Coming back to the bottom-up ideology would correspond to a 10 years step backwards. Moreover, it would lack a sound rationale as there are no more significant outstanding cost efficiency issues concerning fixed incumbent operators.

- **MTR regulation record**

In the past, MTR have been fixed taking into account the traffic sensitiveness of mobile network costs and the investment risk taken by MNOs to develop the infrastructure. Covering these costs - which used to be high - by MTRs was possible thanks to the relative demand characteristics of fixed and mobile, fixed subscription being much less elastic than mobile subscription.

MTR regulation has contributed to the extraordinary success of mobile services in Europe and to the leading role of European mobile industry in the world:

- Mobile penetration in Europe is one of the highest in the world,
- Mobile geographical coverage is nearly complete,
- Mobile service affordability has been fully acknowledged by the Commission when it decided that it was unnecessary to include it in US scope,
- European mobile market is one of the most innovative in the world,
- European mobile industry is at the forefront of world-wide competition both in terms of services and networks and to some extent terminal equipment which is rather unique in electronic communications and in consumer electronics.

A regulatory policy with such a successful empirical record should not be discarded on the basis of primarily hypothetical considerations. In any case, it should be handled with care and mobile operators should not be destabilised by disruptive moves.

However, with the development of the mobile market and the benefit of increased economies of scale, MTRs have seen a continuous decrease since the beginning of this decade. Price per minute on the retail market has also decreased steeply in recent years.

Nevertheless, some important characteristics specific for MTR regulation remain fully relevant:

- The part of network cost which is traffic related is much higher in mobile services than in fixed services: first because a large part of the access network cost is capacity dependant, second because mobile coverage costs increase traffic much more than subscription. This point will be developed in Part II of this Note.

- Mobile data are a fully new field of services, technology and value and mobile regulatory policy priority should be to help its take-off, building on mobile voice economy.

Those two elements show that technically as well as politically, MTR regulation in the future should be done in continuity rather than in disruption. This also implies that for any possible further decrease, the overall level of termination rates should be governed by a glide path that is not steeper than the level of past decreases in termination rates.

I.2. Regulating TRs should be done in relation with today's main market challenge, the take-off of mobile data services as a complement to and not as a substitute for mobile voice services

- **FTR regulation priorities**

FTRs cannot be regulated independently from carrier selection, which will continue to exist in the years to come. Indeed, FTRs and carrier selection can be substituted through automatic call-back procedures, while carrier selection is in direct competition with incumbent retail service.

Therefore network elements should have the regulatory cost allocation value when they are used by the incumbent retail services, by carrier selection services and by fixed termination services. This rule results from a pure cost analysis, as traffic quantities are the relevant cost drivers of traffic related costs (see below).

- **MTR regulation priorities**

MTR regulation is a major part of mobile regulatory policy. So it should also be designed in light of current mobile market challenges.

The major challenge of the mobile market is the take-off of data services.

The worst possible idea in this respect is to assume that a data mobile economy can develop as competing and replacing the voice mobile economy. Such scenario would suppose that the data mobile services alone should cover the cost of mobile infrastructure, which is fully unrealistic. It would also mean that data mobile services would destroy mobile voice value and revenues. Without the latter the further development of mobile infrastructure, of innovative services and of new generation handsets could not take place.

On the contrary, the only possible way to allow the take-off of mobile data services is to build its development on top of mobile voice services, as a fully new and complementary field of specific services. Such a vision has very important consequences on how 2G and 3G network and licence costs should be allocated to voice and data services.

Concerning voice services, in terms of regulatory policy the growth in penetration may not have the same priority as it used to be in the past,

considering penetration levels that have been reached now. But keeping customers on the network, in particular pre-paid customers, is a very important issue. It will help in keeping a universal access to mobile services, and MTR plays an important role in this respect.

Allowing customers to benefit from economies of scale and technological progress, through regular decreases of minute prices of mobile calls, is a very legitimate regulatory goal. This has been achieved in the past by applying current MTR regulatory principles, and the same trend will continue in the future on the same basis.

II. Commission guidance should ensure that there is no disruption in termination rates regulation – be it in principle or *de facto* - but an accurate analysis of the relevant cost of efficient operators as a reference for TR, taking into account national characteristics.

II.1. Relevant TR costs

As a general principle, costs of network elements should be allocated on a non-discriminatory basis between incoming and outgoing calls, retail and wholesale, as stated in the Recommendation on interconnection of 1998, where the Commission stated that interconnection costs should be calculated on the basis of Long Run Average Incremental Costs (LRAIC).

This is logical as traffic costs are by definition traffic related and therefore should be allocated in proportion to traffic quantities. This is a general rule that applies to both fixed and mobile network, although the scope of traffic related costs is very different in fixed and in mobile networks (see below).

It should also be noted that costs which are often assumed to be fixed common costs, for instance Headquarters costs, are in reality part of long run incremental costs of any activity for the timeframe relevant for network costs. For instance, the level of Headquarters (HQ) costs varies with the size of the company and when a company decides to split in two or several parts, each part takes its part of the HQ costs. Therefore the level of HQ costs adapts in the long run to the level of activity. Hence each activity should have in its long run incremental cost its part of HQ costs. The same can be said of most of the so-called “common costs” which are actually incremental costs in the long run perspective relevant for network costs.

Concerning MTR, the two major points on relevant costs are:

- contrary to what might be concluded from a superficial and erroneous comparison between fixed and mobile networks, coverage and capacity costs of mobile networks are traffic related and therefore are relevant for MTR,

- common costs between voice and data services, both on 2G and 3G infrastructures, should be identified and allocated rationally in function of demand characteristics, which means allocated to voice services at least for the years to come.

These two points are developed below. Other questions, such as externality factors or the emergence of all-IP networks are addressed at the end of this paragraph.

Mobile coverage issue

The level of traffic sensitive network costs is much higher in mobile than in existing fixed networks. In particular mobile network coverage is mainly traffic enhancing while fixed network coverage is mainly subscription enhancing.

Standardising the perimeter of relevant costs for FTRs and MTRs would be trying to apply to mobile networks the concept of “traffic sensitive” and “non traffic sensitive” costs currently applied to fixed termination costs.

But doing so would ignore a key feature of mobile telephony: customers of mobile services may call in mobility! The geographical expansion of mobile networks mainly leads to increasing the usage of existing subscribers, those who were already subscribers prior to this geographic expansion, much more than to increase the number of subscribers.

When a new base station is added in a mobile network, the probability is very high that the first call to be routed on this base station will be outgoing or received from a customer who subscribed to the network prior to the installation of the base station. Then, the probability that the first call corresponds to a new customer who subscribed after the base station is added to the network is virtually zero.

In general, a satisfactory pricing policy consists of having the cost of incremental network resource covered by the price of the service for which the quantity sold may be increased thanks to this incremental resource. In the case of mobile network coverage costs, since their main effect is to increase traffic of existing customers and not the number of subscriptions to the network, the natural consequence is that these costs should be integrated in the price of traffic. This is very different from the fixed network case, where the main impact of increasing geographical coverage is to increase the customer base of the network.

On a quantitative approach, traffic in dense areas determines the network dimensioning and configuration of mobile access. Therefore network costs in dense areas are relevant for MTRs, which is hardly contestable. In areas where capacity limits are not reached, the analysis requires more information.

Statistics to separate traffic effect from subscriber effect after coverage is completed are not available on a general basis, but happen to be available in specific but significant cases. Existing numerical examples show that the effect

of coverage on traffic is one order of magnitude higher than its effect on subscription.

From the densest areas where capacity issues determine the configuration and the size of the network to the less dense areas where coverage creates much more additional traffic of existing subscribers than more subscribers, it can be seen that it is relevant to charge the cost of mobile access network to traffic.

Voice-data cost allocation

Mobile network cost should be allocated first between voice and data services before network cost allocated to voice is allocated between retail and wholesale (MTR) services, as wholesale and retail voice cost must be analysed on a consistent cost basis.

Incremental voice and data network costs and joined costs between voice and data services must be identified.

Due to the fact that licence coverage obligations are generally more severe for voice service than for data service, and to the fact that network engineering rules are generally fixed to meet the constraints of voice service, offering voice service will be the main cost driver of network roll-out and therefore the scope of cost categories relevant for voice incremental cost should be much larger than the scope of cost categories relevant for data incremental cost.

Common costs between voice and data should be allocated considering demand characteristics. As the elasticity of data mobile services is today much higher than the elasticity of voice services, common costs between voice and data should be mainly allocated to voice services.

3G is the replacement technology of 2G for voice-data infrastructure submitted to the same voice-data cost allocation rationale. The fact that 3G technology is meant to be an integrated voice-data infrastructure is quite obvious from the observation of the following simple facts:

- 3G standards are voice-data
- 3G handsets are voice-data for the vast majority
- Actual 3G networks are voice-data,
- Offers based on 3G technology are mainly voice-data.

3G technology allows to build a new general purpose voice-data infrastructure meant to replace 2G infrastructure as:

- it uses spectrum more efficiently
- it makes network design much simpler and much more flexible

But transition will be long due in particular to the issue of handsets.

If 3G had been specified for data service alone to be served in parallel with voice service served by 2G technology, which is an assumption sometimes heard, 3G standards, technology, networks, terminal equipments, offers, etc.

would have been completely different and would have had nothing to do with what we observe today.

3G licences gave access to extra spectrum necessary for the general development of mobile services. Their cost allocation between voice and data will depend on domestic licences conditions in particular in terms of geographical coverage of voice and data services.

As a conclusion on this voice-data paragraph: The worst possible option for the take-off of data services is to have these services bear common costs which could be covered by voice services. Therefore a drastic decrease of costs allocated to voice service will only increase costs allocated to data services and will jeopardize their growth.

Other points

The possible integration of externality factors should be let to the appreciation of NRAs, as they depend on local market characteristics. As a general rule, network externality should be the only factor worth analysing, as call externality cannot be considered as generally positive, it may also be very negative and if so can be internalised by service providers (by selecting a special service pricing scheme) and residential subscribers (in the way two persons chose to call one another).

The emergence of all-IP networks replacing TDM networks is a technical transformation of the level 3 layer ("network") of public networks as digital transmission systems were a transformation of their level 2 layer ("link"), with no direct implication on level 7 layer ("application") relevant for telephony services and their interconnection issues, and no impacts on the cost structure of level 1 (physical medium and access infrastructure).

All operating assets should be taken into account, whether or not they are fully amortised in the accounting.

II.2. Reference efficient operator per country

The efficient operator should be defined country by country, considering the local characteristics in terms of market, geography, spectrum and licences.

All relevant costs, as defined in the above paragraph, should be taken into account.

In the Recommendation on interconnection of 1998, the Commission stated that interconnection costs should be calculated on the basis of forward looking Long Run Average Incremental Costs (LRAIC). When this Recommendation was adopted, there has been a lot of misinterpretation of the LRAIC concept and inconsistent ways to articulate replacement costs and amortisation practice. But the work which has been undertaken since has lead in most Member States to reasonable practice in the application of LRAIC to fixed incumbent costs.

In particular, all the engineering and dimensioning characteristics of the efficient operator network should be taken from the observation of actual networks. These observations should be done consistently, as a theoretical network having a mix of the technical characteristics of several networks may not correspond to a real life operating configuration.

Incumbent operating and support costs should come from actual accounting data.

Capital costs should be calculated using economic depreciation. Economic depreciation is the appropriate method of depreciation consistent with the LRAIC approach. Economic depreciation deals with the optimal profile of cost recovery over time. Economic depreciation measures the change in economic value in any given year. Economic value is basically the present value of the future revenues of an asset minus the present value of the future operating costs of that asset. In telecoms, we expect assets to depreciate fairly quickly because with the pace of technological change we expect new equipment to come onto the market which is lower cost than current equipment (and therefore has a higher economic value). This means that operators will want to recover the cost of their equipment more quickly in the early years to remain competitive in the market; otherwise they are maintaining equipment that is less efficient than is available in the market. So an operator will front load its costs and the optimal path of cost recovery is to incur a higher capital charge in the early years of an asset's life. In a competitive market, economic value or super normal profits will be zero, so the economic depreciation method basically calculates the efficient path of cost recovery, which will front load costs such that expected revenues equal expected costs. Note this gives the most efficient outcome in a competitive market, which economic regulation is intended to mimic.

ⁱ BT is unable to support this paper.