Reflections on the proposed regulation of international mobile roaming services

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Budapest, 12 May 2006
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Introduction

Expert Management Consulting is a recognized Hungarian consulting firm specialized in a wide range of economic issues concerning network industries, with a considerable focus on the telecommunication sector. Within our scope of business we focus a major part of our activity on issues related to national and international regulations, wholesale and retail pricing methods.

Concerning the present consultation topic of international roaming regulation, we feel that some relevant issues, not having been presented and discussed so far, during the first phase consultation period, should gain emphasis. So that a well-grounded instead of a vulnerable decision could be brought.

Our primary aim with this paper is to shed some light on these issues, to raise relevant questions, rather than to elaborate on detailed figures either of national mobile markets as an aggregate, or of single MNOs (Mobile Network Operators).

Executive Summary

We have recognized three milestones of the regulatory procedure consequently following each other. The necessary sequence of these three milestones derives from

(i) the Better Regulation principle of the European Union and
(ii) sheer economic rationale.

The milestones can be best identified by the three questions illustrated in the chart below.

We have organized our paper around these three issues, each dealt with in one single section.

First, it must clearly be proven that the present situation in the field of international roaming requires some regulatory attention. In the section dealing with the possibly
ocurring need for regulation we list relevant questions, answering which will support either the acception or the rejection of the need for regulation. We presume that the need for regulation is not straightforward, and it requires more detailed investigation from the Commission.

Second, in case the need for regulation becomes verified, effective tools of regulation must be identified. It has to be decided which element of roaming prices might be subject to regulation: wholesale, retail, or both. In this section we will bring on several aspects to help coming to a rather well-established decision concerning the targets and tools of regulation. We suggest that, in case regulation is needed, its primary target should be the wholesale level.

Third, finding tools which help the Commission to reach its primary aim effectively is not sufficient. There might be certain measures that, being introduced, would force down retail roaming prices significantly, in the short run. However, regulation must be consistent in the sense that roaming is a small and organic part of wider mobile service bundle. There exist strict economic interdependencies within this bundle that link service elements, so that any regulation influencing only one service element will directly affect the rest of the bundle. We identify such side effects that should be thoroughly considered during the regulatory process, if consistent, instead of an adverse regulation is intended to be implemented.

In the following, ‘Proposal’ will refer to ‘Proposal for Regulation (EC) of the European Parliament and of the Council on mobile roaming services in the Single Market’ (Brussels, 3 April 2006)

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Any need for regulation?

In the first section of the Proposal the Information Society and Media Directorate-General of the European Commission (hereinafter DG) lists some statements which intend to be clear proofs of the need for regulation. According to our firm opinion, these statements should be better supported by facts and argumentation should be strengthened in order to provide clear and robust evidence for the need for regulation. For instance,

- the DG suggests that international roaming prices are unjustifiably high and do not tend to decrease. However, we believe that any price can be referred to as ‘unjustifiably high’ only if the ‘justification process’ is
  - accurately defined, and
  - precisely conducted.

Furthermore, the industry and sector specific relevance and competence of the process is also essential.
For instance, if the justness of roaming prices are to be supported by exact cost analyses and statements, then these analyses and statements alone can determine whether the examined price elements are unjustifiably high, or not.

Moreover, signs of slowly diminishing consumer roaming prices can indeed be traced down, due to, for example, bilateral and multilateral wholesale discount agreements (IOT\(^1\) discounts). IOT-discount agreements result in significantly lower wholesale costs, allowing retail prices (prices paid by customers) to diminish, as well, since decreases of retail prices should be a consequence of wholesale trends, especially IOT-changes. Diminishing retail roaming tariffs are one of the key factors leading to the experienced growth in roaming traffic, over the past few years – as the case of growing Hungarian roaming usage illustrates:

![Growing International Roaming Usage of Hungarian Mobile Subscribers](source: Hungarian National Regulatory Authority, www.nhh.hu)

Another argument that makes the above statement ('no signs of diminishing') at least to be taken with a pinch of salt is that the pricing mechanisms of MNOs have varied over the past few years – for instance quite a few MNOs have just recently moved on from IOT + markup towards zonal pricing method. This change results in two completely different systems that makes it difficult, or sometimes even impossible, to examine price trends over time. Especially considering the fact that with zonal pricing several directions (countries) exist which may be priced far below their wholesale costs, as a part of a bundled offer (due to the necessary logic of zonal pricing).

\(^1\) IOT = Inter Operator Tariff (wholesale component of the roaming prices)
The DG also refers to the recently launched roaming website which shows a range of prices across the EU that, according to the DG, cannot be justified for calls with identical characteristics. However, in our understanding, the range itself is not an appropriate measure, but the dispersion of the values is at least as important. If a small number of outlier values are the cause of the wide range, then primarily these outliers ought to be examined. The data on the roaming website shows the majority of roaming tariffs being within a relatively narrow band, and only a few directions are extremely expensive.

Investigating the economic validity of the prices in the majority of the roaming directions is a completely different issue from investigating the reasons for the range, and as such should be carried out after examining the underlying factors that might or might not explain outlier values.

Nevertheless, the data set cleaned from outlier values itself is not a sufficient ground to judge roaming prices. When looking at a price item per se, one cannot decide whether this price item is too high or not. Contrarily, the price item need to be confronted with the value of the service, that can be approximated with the incurring costs of providing that certain service. We illustrate this argument in the chart below:

Looking at the same price item: (i) in Case 1 the detailed investigation shows that incurring costs are ‘significantly’ lower than the price charged for that certain service, while (ii) in Case 2 profits turn out to be ‘justifiable’.
The DG mentions in its Proposal three operator-specific proceedings which are continuing and pending a final decision by the Commission. As the DG itself admits, these proceedings are not over yet, their outcome is still in abeyance. Thus the sheer fact that such proceedings are presently being conducted does not give any ground for a comprehensive regulation, especially without any negative judgement having been passed. As we stated above, the ‘justification process’ must be completed precisely prior to coming to a definite decision to regulate.

The Proposal also wishes to abolish charges for receiving mobile calls abroad, since, as the DG argues, paying for incoming calls is contrary to the usual pricing principle in Europe. The mentioned call types are referred to as outbound mobile terminated calls (MTCs). We would like to draw attention to the following two facts: (i) outbound MTCs do have additional costs compared to domestic MTCs, as we will show it below, (ii) the ‘calling party pays’ principle goes in line with the prerequisite that customers must be fully informed about the charges they face when making a call (in case the called subscriber is abroad, the calling party in most cases has no information about this fact).

Considering that the existing additional costs of outbound MTCs cannot be directly assigned to the calling party, such costs must be returned from other services. Neither the aim, nor the consequence of the regulation should be a situation when MNOs are forced to cross-finance some of their services from the revenues of other services, which are out of the scope of the proposed regulation (consider the so-called ‘waterbed effect’).

According to our understanding, there are several open questions regarding the necessity of regulating international roaming. The DG shall produce rather specified and better established arguments as evidence.

We believe that finding such arguments requires a more thorough investigation. In orientation of such an investigation we introduce the following questions and aspects showing that we do believe that market failure in terms of international roaming tariffs seems not as straightforward as the DG has described it.

Identifying anti-competitive practices in such a complex market as international roaming is not obvious:

- **What can be found in terms of prices when examining the international roaming market segment?** Have regulators really discovered a situation that calls out for action?

  There are NRAs currently conducting market analyses of the mobile roaming segment, investigating whether (i) actors with significant market power can be identified, (ii) market environment is competitive and efficient, (iii) MNOs abuse their position to charge unduly high roaming prices.
To our best knowledge, no obvious and unambiguous evidence has been revealed so far by any of these analyses and investigations, neither about an incompetitive roaming segment nor about an MNO charging ‘unjustifiably high’ rates.

The fact that there is no example of a successfully finished national investigation finding and disclosing any evidence against MNOs in terms of international roaming supports our statement: market failure is not straightforward.

☐ Is the price level itself an appropriate indicator of the presumed market failure?

It is indeed misleading if roaming charges (per minute rates) are examined on their own. Per minute rates make a reasonable, coherent whole only together with subscribing fees (per month), domestic charges and other relevant price (and service) elements. International roaming is part of a much wider service bundle MNOs offer to customers. In case the proposed roaming regulation comes into force, roaming may easily fall out of the general retail bundle, and become a value added service, treated accordingly.

☐ If current roaming tariffs are a result of insufficient competition, will any kind of regulation help?

The European Union created its Better Regulation principle in order to limit the scope, range and competence of community level regulatory bodies.

The primary aim of any regulation should be the protection of the interests of citizens and consumers, by strengthening the efficiency of national rules, while minimizing (negative) economic costs. Nevertheless, the proposed regulation may not fulfil the above requirements because of its presumably existing unintended consequences – as we will show it below.

Better Regulation leaves space for regulatory action only in case it is clearly proven that in the regulated market environment consumers will be better off than before. So there exists a double burden of proof (i) beside proving that the present situation is not a result of a sufficiently competitive market environment, it also has no be proved that (ii) the proposed regulation, with all of its side effects, will bring, on the whole, higher consumer welfare.

In order to make it certain that the regulated market will be more favourable for the consumers altogether than the unregulated market (even if the latter suffers from market failure of some extent), a detailed impact assessment has to be prepared. The impact assessment shall be targeted at examining the expected effects of future regulation from all relevant aspects of each stakeholder / stakeholder group.
Is there both legal and economic basis for a robust roaming regulation?

It is, principally, fundamental in case of any market regulation procedure to have a robust and consequent legal basis. Unless such basis can be identified, the complete idea of the regulation becomes vulnerable and will be exposed to continuous offences from part of various market actors (mainly MNOs and interested parties, or negatively affected stakeholders).

Article 95 of the Treaty is intended to be used as the legal basis by the DG. However, Article 95, in our understanding, is related to the harmonization of existing (still, differing) national legislation, in order to foster the development of the internal market – as tacitly involved in paragraphs 4 and 5 of the Article. In terms of neither wholesale nor retail roaming prices, do we know about any national legislation that shall be subject to a harmonization process.

Strictly after finding the appropriate legal basis may the DG search for, in economic sense, suitable practical solutions.

Carrying out detailed investigation concerning the above introduced aspects could help avoiding an ill-considered, artificial intrusion in the mobile market and could also help the DG to come to a more deliberate decision.

Again, in the following section we list issues aimed at identifying the probable effects of existing, possible measures available for the Commission. These issues gain relevance only in case the background and necessity of regulation receives undeniable verification.

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Any tool for an effective regulation?

In case clear facts are found that support the need for regulation, the DG will have one milestone behind, still a few to pass.

The second milestone is to identify and determine the appropriate tools that best serve the DG’s targeted outcome, and which are, in economic sense, reasonable. We list some questions below that must not be neglected when choosing from the available regulatory arsenal.

Which underlying factors / fields can be subject to regulation? What might be the core origin of the – so far not detected – market failure?

Retail roaming revenues have a significant wholesale component, usually about 75-90 percent of the retail revenue. Thus, although the
final goal of the DG is to decrease retail prices, these prices cannot be examined and regulated on their own.

When a customer of an MNO is making / receiving a call abroad, they use the network of a foreign MNO. For providing availability and network capacity, the foreign MNO charges the home MNO with so-called Inter Operator Tariffs (IOTs), which embody the wholesale component of roaming prices. IOTs are usually charged when making a call abroad (Mobile Originated Call, MOC), but in some cases\textsuperscript{2} also when receiving a call (Mobile Terminated Call, MTC).

IOTs are subject to bilateral and multilateral commercial agreements, in which not only single MNOs but often worldwide alliances are involved. However, MNOs do not always have direct influence on the level of received IOTs. These IOTs form the basis of retail international roaming rates, which are primarily relevant for customers. Thus, wholesale and retail price components have to be treated separately.

Three, conceptually different approaches can be identified:

\begin{itemize}
    \item **WHOLESALE REGULATION ONLY** – In case the proposed regulation takes the form of wholesale regulation only, the major component of roaming tariffs would be reduced. The effect of wholesale regulation on MNOs may be ambiguous – since while reducing a significant cost element of outbound roaming, regulation will also decrease inbound roaming revenues of the same MNO. The final balance will be a function of the proportion of inbound and outbound traffic.

    However, it may not be the tool that guarantees price decreases on the retail side, in the short run. In case the widened retail margin is not transferred to customers, sole wholesale regulation may leave MNOs with higher profit rates.

    Nevertheless, competition influences retail behaviour: provided the retail segment is sufficiently competitive, retail prices will follow the reduced IOT level.

    \item **RETAIL REGULATION ONLY** – Provided the DG’s primary aim (i.e. lower roaming retail prices), the idea of regulating retail prices themselves is no far to seek.

    At the same time, since wholesale costs (IOTs) are left untouched in this scenario, sole retail regulation may force MNOs to price roaming services below their wholesale cost. It is questionable though, whether such measures are lawful, irrespectively of their
\end{itemize}

\textsuperscript{2} MTC IOTs are not common in EU countries, nevertheless there are numerous examples in case of other non-European MNOs.
undoubted direct effect on the decrease of retail prices, aiming at, but not necessarily resulting in higher customer welfare.

- **REGULATION BOTH ON WHOLESALE AND RETAIL LEVEL** –
  In principle, simultaneously introducing both wholesale and retail regulation measures can be a relevant approach, as well. However, problems arise when intervening in the retail market. These problems are twofold.

  First, it is doubtful if the far too complex structure of retail roaming service packages can be handled with direct regulatory tools. Any direct measure that intends to push retail prices down would destroy the flexibility of mobile services, leading to artificially generated new solutions with possibly lower quality of service.

  Second, the retail segment as a whole is labelled as competitive and efficient even by the Commission in its 11th Report on the European Electronic Communications Regulation and Markets:

  ‘The evidence suggests that intensifying competition is bringing increased consumer benefits and the outlook for innovation and investment within Member States and across borders is positive.’

  Thus a competitive and efficient retail segment will not allow margins above regulated IOTs to remain high.

  Altogether, in our view, two relevant questions still remain with answers pending, which are:

  - Can a joint retail and wholesale regulation be fruitful for the customers while being not harmful for the MNOs?
  - Is joint wholesale and retail regulation better than ‘no regulation’?

  We presume that the answer to these two questions is negative.

  □ Are there effective tools available in terms of wholesale regulation? Can any of the wholesale tools support retail regulation? Or does expected retail price decrease require a different regulatory approach?

  From the previous question it can be clearly seen that, in case the need for regulation becomes verified, some sort of wholesale regulation may become the starting point.

  The DG proposes to tie international wholesale prices (IOTs) to the prices charged for national roaming as a benchmark (e.g. in case of virtual network operators, MVNOs). The problem with this approach arises partly from the fact that not all member states dispose of such benchmark, and identifying / creating a uniform European benchmark is not really viable in practice.
Moreover, tying IOTs to domestic roaming wholesale prices can easily generate a so-called ‘waterbed effect’ between domestic and international roaming services.

Another possible tool in terms of wholesale regulation was suggested by the European Regulators Group (ERG). ERG proposed to use a price cap mechanism, that is to maximize IOTs. Again, with a uniform European price cap regulation the same practical problem arises as in the case of a uniform domestic roaming benchmark, namely determining its value requires answering some controversial questions, and thus leading to disparities between operators. In case the right (and obligation) of determining the actual value of the price cap is delegated to member states, and only a uniform theoretical framework is designed at EU-level, the timing and exact form of implementation may cause similar disparities.

Does the EU attempt to compensate for the apparent limitations and clear market distorting effects of any of the above tools?

In case any of the possible tools suggested by the DG becomes implemented, not only the targeted segment will be affected. Tight links and interdependencies connect seemingly distant service elements.

Consider, for instance, the ‘home pricing’ principle, as a special benchmark-based kind of regulation. Home pricing may seem an appealing approach, at first sight. Paying exactly the same amount for a call abroad as it would cost at home is definitely an attractive idea. However, two major drawbacks makes the idea less reasonable.

Firstly, a rational reaction from the part of MNOs on tying international roaming prices to domestic tariffs will be increasing domestic charges – not necessarily in terms of per minute rates, but by introducing new, innovative tariff elements, offering fewer discounts less frequently, etc. The result will be more expensive domestic mobile services on aggregate.

Secondly, home pricing inevitably creates arbitrage opportunities accross Europe, by cross-selling or re-packaging services of other MNOs (for instance SIM-cards of MNOs offering the cheapest domestic tariffs). Arbitrage, by definition, is attractive to business, so it is only a matter of time before such opportunities will be noticed and realized, leading to an unsustainably complex and non-transparent retail roaming market – which is usually more beneficial for creative business than for consumers.

Such links, interdependencies and side effects of wholesale and / or retail regulation can also be identified in the case of other proposed elements of roaming regulation. Disadvantages caused by the limitations of regulation shall be, somehow, compensated for.
In this section we intended to raise issues concerning the possible target of the regulation, provided market failure becomes undoubtedly proven. Passing this second milestone requires a decision whether wholesale or retail components of roaming prices should be subject to regulation.

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**Any chance for a consistent regulation?**

After defining the exact target of the regulation, arrives the DG at the third milestone: working out consistent details and a coherent structure of measures to take.

The specific details will create the activity-framework for MNOs in which they have to continue their operations. No such framework should be created that hinders competition, destroys growth and R&D opportunities, or increases the welfare of one consumer group at the expense of another.

In order to avoid a kind of regulation that suffers from any of the above problems, many aspects have to be thoroughly considered and reconciled in a tactful manner. We list the most relevant of the numerous questions emerging – there must be strong and real commitment from the DG’s side to find acceptable answers.

- **How will the proposed (unified and common) regulation affect MNOs with significant proportion of roaming traffic from / towards non-EU destinations?**

  Considering any form of wholesale regulation, the IOTs of European MNOs will be decreased.

  Thus, MNOs of countries that traditionally have significant volume of roaming traffic (outbound and / or inbound) outside the EU will definitely face ill-proportioned roaming expenditures (non EU IOTs) and / or profit losses. The bargaining power of European MNOs in relation with non-European MNOs will be significantly decreased, since they have to offer lower IOTs on a non-discriminatory basis, without any market force of reciprocity.

  Present IOT levels are result of bitalteral and multilateral, strictly commercial agreements. If the hands of one party are tied, the other party gets into a far better bargaining position. With the interests of the European economy in view, no European regulatory body may cause serious harm to enterprises in the tractive sector of mobile communication.
Can the significantly different interests of 'dominantly inbound' and 'dominantly outbound' countries be brought together under the auspices of a uniform roaming regulation?

Uniform wholesale regulation is not only problematic in respect of EU – non-EU relations, but can cause tension amongst operators of different EU member states.

There exist countries / regions within Europe with traditionally more holiday / business features that attract travellers. In such countries the financial position of MNOs on roaming operation is dominated by a significant proportion of revenue realized from IOTs. We refer to such countries as 'dominantly inbound'.

On the other hand, MNOs of countries with lower tourism / business potential experience more intense outbound roaming traffic, with a smaller fraction of IOT-revenues compensated by the retail side – these we call 'dominantly outbound' countries.

These two types / groups of countries have completely polar interests. 'Dominantly inbound' countries are interested in higher IOTs leading to higher volume of wholesale revenues, while lower IOTs are favourable for 'dominantly outbound' countries, since they could reduce their costs, still keeping sufficient retail margin.

It is questionable, how a uniform regulation would be able to tackle this duality – it can be rather suspected that MNOs of certain European countries will partially benefit on the account of others.

MNO alliances tend to expand outside the EU – how can the proposed EU-specific regulation be adopted to their worldwide business environment?

MNOs started to form worldwide alliances (e.g.: Freemove, Starmap) in order to make a united effort to benefit from mutually favourable agreements. These agreements usually take the form of specific discount structure that affects IOT levels.

Discounted IOTs result in significantly lower wholesale costs, and thus lower consumer prices. Competitive forces are indeed alive in mobile alliances.

Nevertheless, wholesale regulation applied to European MNOs (but not to non-European ones) would cause discount-realignments that will distort the balance within alliances. Distorted balance itself may not be of any concern to the DG, not like its indirect negative effects on competition.
In terms of the framework of the proposed regulation, is there any intention to take the incurring costs of roaming into consideration?

Roaming does have its own direct and indirect additional costs which do not belong to any other services of an MNO. The option of being available everywhere in Europe is not for free, thus should not be taken for granted. Network capacity, call routing and financial settlements all cause costs that have to be recovered from the service they are related to.

Prices for making a call abroad (so-called outbound MOC, Mobile Originated Call) must cover the IOT element plus the home operator’s additional costs incurring from the retail part of the activity.

The same applies to outbound MTCs (Mobile Terminated Calls) which have, indeed, their relevant own direct costs – cost of transit, terminating the call on the foreign operator’s network, billing etc. This means additional cost elements compared to domestic call termination. Forcing MNOs to completely neglect these costs in pricing is a seriously anti-competitive measure, which goes against both economic logic and the present regulation principle of the EU.

How can the proposed regulation be targeted at a price of zero in terms of outbound MTCs? Even the currently available most favourable roaming offers (some of which are already cheaper than the DG’s proposal) contain a fix connection-fee for covering fixed costs incurring. If certain, de facto existing costs of roaming services are not allowed to be recovered from the same service element, who is going to pay / compensate for it? May any regulation cause losses that require cross-financing?

Roaming services are a small, nevertheless organic part of a much wider service-bundle – if roaming prices are forced down, can it be achieved without any unfavourable effect on other tariff elements?

Roaming services add up only to a small proportion of the mobile expenditures of an average subscriber. We illustrate the magnitude of roaming services, using Hungarian data – the figure below shows the proportion of roaming traffic within total roaming traffic (calculation is based on minutes of usage).
International roaming traffic makes up no more than 6.5% of total mobile traffic – with a tendency of stabilizing at around 3% in recent years.

For an average subscriber roaming is of marginal importance. Recognizing this fact, MNOs have developed special offers for a narrow customer segment who travel much and use their cell phone a lot abroad. Sound competition forced MNOs to segment consumer groups in order to provide the best offers suiting the needs of each consumer group. If roaming services become regulated as a whole, the segmenting ability of MNOs may be reduced. In this case customers will not have the chance to choose from offers with (i) cheaper domestic tariffs in exchange of rather expensive roaming, and (ii) favourable roaming charges but less cheap domestic tariffs. Compulsory, comprehensive reduction of roaming prices will cause aggregate treatment of domestic tariffs, as well.

Thus, if MNOs cease to have the right / opportunity to offer more beneficial home services in exchange of less favourable roaming services, then the welfare level of an average subscriber may not reach their previous welfare level, existing prior to the regulated era. Is there a real chance for a notable growth in customers’ welfare by implementing the proposed regulation?