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International roaming and mobile termination in Latin America

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Roaming and mobile termination I

- Both services have a significant impact on consumer usage.
- They form a large percentage of operators' income - around 6% in Europe from roaming alone.
- In both cases, there has traditionally been little regulation, despite distortion of competition.
- Ratios of charges to real costs are very high, revealing the market power of operators.
- Both cases lead to inefficiencies in the sector.
- In recent years, concern has arisen that these charges should be regulated, particularly in the European Union and to some extent Latin America.
- The European Union took drastic steps on roaming in 2007 and on mobile termination in 2009.

Roaming and mobile termination II

- This means that charges have not become cost-oriented, as they would in a competition situation.
- Mobile termination charges, if not strongly regulated, result in cross subsidy between the fixed and mobile networks, with the termination market subsidizing the originating market.
- Roaming charges mean that roaming users are subsidizing other users.
- In both cases, operators are competing with lower charges where their users’ calls originate.

Roaming

Roaming

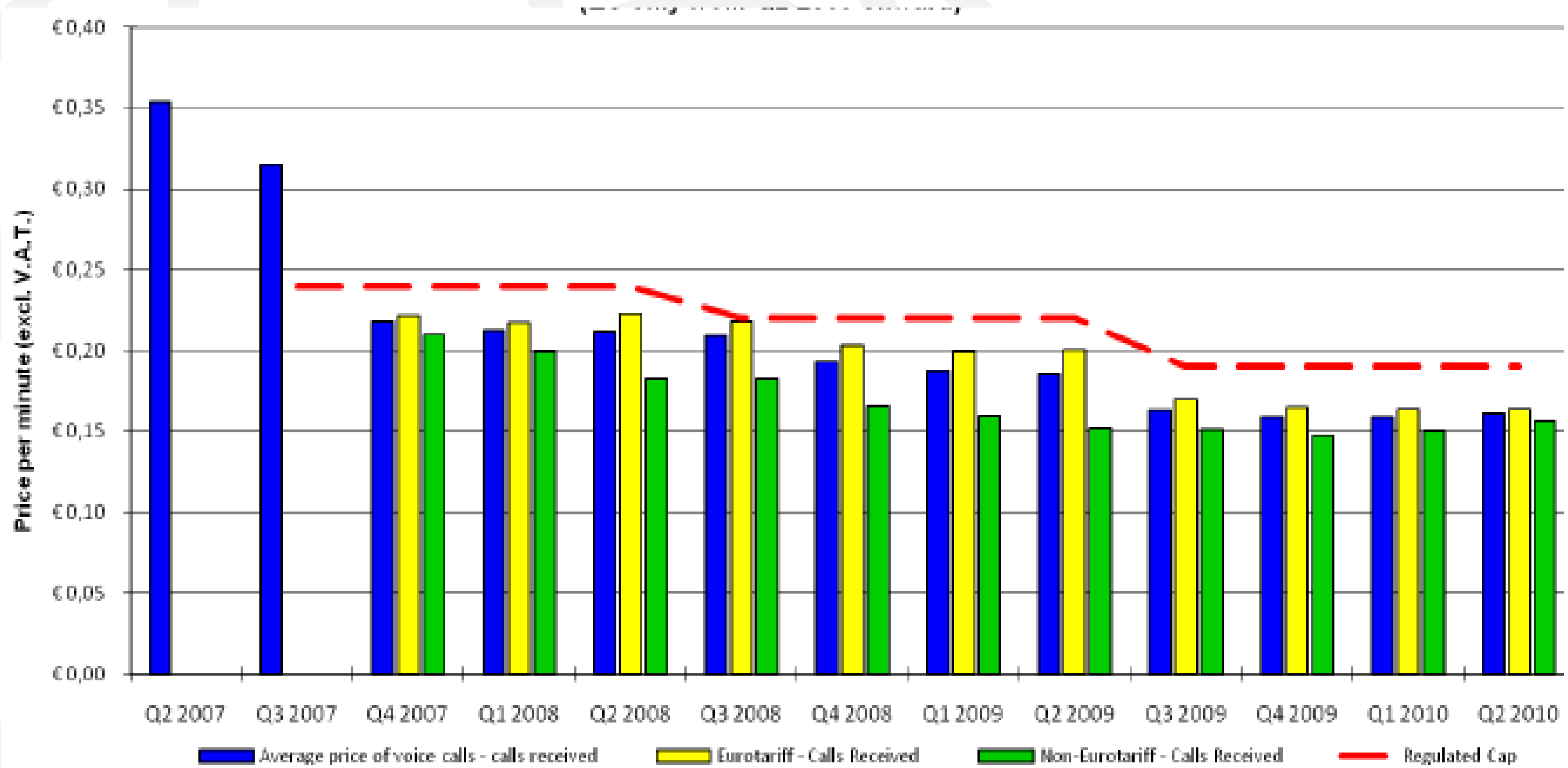
- These charges are invisible to consumers so markets are inelastic.
- Consumers' reaction generally doesn't get beyond "roaming shock".
- There is implicit agreement between operators not to compete on roaming charges.
- Even operators with low spot charges are not promoting their services.
- Neither are multinational operators that offer roaming between their subsidiaries setting or promoting attractive tariffs.
- With UMA-enabled soft mobiles, you can reach the UMA Network Controller (UNC) in your country of origin using IP by inserting your mobile phone SIM card into a USB device, then using it as if you were were using your mobile handset in your country of origin with your original number. This cannibalizes the roaming service.

Roaming

As we see it, unless there is regulatory intervention the roaming market has a tendency to stagnate into a kind of “implicit agreement” with high prices and little transparency concerning available services.

Analysis of tariffs

Europe – Results for incoming calls



Source: ERG Report 2010

Analysis of tariffs

Europe - results

- Regulation has brought down roaming charges within the EU and improved transparency for consumers, reducing the risk of roaming shock.
- At the same time, increased usage has not compensated for lower charges.
- According to Informa Telecoms & Media, operators have increased charges for incoming roaming calls from outside the EU, and for outgoing roaming calls made from other countries by EU customers.
- In either case, efficiency has increased.

Analysis of tarifs

Latin America - Argentina

Roaming in:	Incoming call		Outgoing call		SMS (Inc – Outg)	Data (MB - Uplink/Downlink)
	Billed	Prepaid	Billed	Prepaid		
Brazil	2.50.	2.50	2.50	2.50	0.00 – 0.50	8.00
Chile	2.50	2.50	2.50	2.50	0.00 – 0.50	12.00
Colombia	2.50	2.50	2.50	2.50	0.00 – 0.50	12.00
USA	2.50	2.50	2.50	2.50	0.00 – 0.50	12.00
Spain	2.50	2.50	2.50	2.50	0.00 – 0.50	12.00
France	2.50	2.50	2.50	2.50	0.00 – 0.50	12.00
Mexico	2.50	2.50	2.50	2.50	0.00 – 0.50	12.00
Panama	2.50	2.50	2.50	2.50	0.00 – 0.50	12.00
UK	2.50	2.50	2.50	2.50	0.00 – 0.50	12.00
Uruguay	0.60	0.60	0.60	0.60	0.00 – 0.21	8.00
Venezuela	2.50	2.50	2.50	2.50	0.00 – 0.50	12.00

Source: Teleconsult - Un operador y un plan [*An operator and a plan*]
Average increase between April 2009 and January 2011: 25.63%

Analysis of tariffs

Latin America - Brazil

Roaming in:	Incoming call		Outgoing call		SMS (Inc – Outg)	Data (MB - Uplink/Downlink)
	Billed	Prepaid	Billed	Prepaid		
Argentina	2.19	2.69	1.69	2.69	0.00 – 0.79	19.30
Chile	2.19	2.69	1.69	2.69	0.00 – 0.79	19.30
Colombia	2.19	2.69	1.69	2.69	0.00 – 0.79	19.30
USA	2.19	2.69	1.69	2.69	0.00 – 0.79	19.30
Spain	2.19	2.69	2.19	2.69	0.00 – 1.09	19.30
France	2.19	2.69	2.19	2.69	0.00 – 1.09	19.30
Mexico	2.79	2.69	2.79	2.69	0.00 – 1.09	19.30
Panama	2.19	2.69	1.69	2.69	0.00 – 0.79	19.30
UK	2.19	2.69	2.19	2.69	0.00 – 1.09	19.30
Venezuela	2.19	2.69	1.69	2.69	0.00 – 0.79	19.30

Source: Teleconsult - Un operador y un plan [*An operator and a plan*]
Average variation between April 2009 and January 2011: 0% for billed, -8.81% for prepaid and + 12.21% for data

Analysis of tariffs

Latin America - Chile

Roaming in:	Incoming call		Llamada Saliente		SMS (Inc - Outg)	Datos (Mb - Uplink/Downlink)
	Billed	Prepaid	Billed	Prepaid		
Argentina	1.70	2.32	1.70	2.32	0.00 – 0.476	13.00
Brazil	1.70	2.32	1.70	2.32	0.00 – 0.476	13.00
Colombia	1.70	2.32	1.70	2.32	0.00 – 0.476	13.00
USA	2.38	2.32	2.38	2.32	0.00 – 0.476	13.00
Spain	1.70	2.32	1.70	2.32	0.00 – 0.476	13.00
France	2.12	2.32	2.12	2.32	0.00 – 0.476	13.00
Mexico	1.70	2.32	1.70	2.32	0.00 – 0.476	13.00
Panama	1.70	2.32	1.70	2.32	0.00 – 0.476	13.00
UK	1.70	2.32	1.70	2.32	0.00 – 0.476	13.00
Venezuela	1.70	2.32	1.70	2.32	0.00 – 0.476	13.00

Source: Teleconsult - Un operador y un plan [*An operator and a plan*]
Average variation between April 2009 and January 2011: + 26.78% for prepaid and 0% for the rest.

Analysis of tariffs

Latin America - Colombia

Roaming in:	Incoming call		Outgoing call		SMS (Inc – Outg)	Data (MB - Uplink/Downlink)
	Billed	Prepaid	Billed	Prepaid		
Argentina	1.55	1.55	1.55	3.34	0.00 – 0.59	10.00
Brazil	1.55	1.55	1.55	3.34	0.00 – 0.59	10.00
Chile	1.55	1.55	1.55	3.34	0.00 – 0.59	10.00
USA	1.55	1.55	1.55	3.34	0.00 – 0.59	10.00
Spain	1.55	1.55	1.55	3.34	0.00 – 0.59	10.00
France	1.55	1.55	1.55	3.34	0.00 – 0.59	10.00
Mexico	1.55	1.55	1.55	3.34	0.00 – 0.59	10.00
Panama	1.55	1.55	1.55	3.34	0.00 – 0.59	10.00
UK	1.55	1.55	1.55	3.34	0.00 – 0.59	10.00
Venezuela	1.55	1.55	1.55	3.34	0.00 – 0.59	10.00

Source: Teleconsult - Un operador y un plan [*An operator and a plan*]
Average variation between April 2009 and January 2011: + 76.19% for data and 0% for the rest

Analysis of tariffs

Latin America - Mexico

Roaming in:	Incoming call		Outgoing call		SMS (Inc- Outg)	Data (MB - Uplink/Downlink)
	Billed	Prepaid	Billed	Prepaid		
Argentina	1.16	1.39	0.35	1.39	0.00 – 0.41	9.00
	1.16	1.39	0.35	1.39	0.00 – 0.41	9.00
	1.16	1.39	0.35	1.39	0.00 – 0.41	9.00
Brazil	1.16	1.39	0.35	1.39	0.00 – 0.41	9.00
	1.16	1.39	0.35	1.39	0.00 – 0.41	9.00
Chile	1.16	1.39	0.35	1.39	0.00 – 0.41	9.00
	1.16	1.39	0.35	1.39	0.00 – 0.41	9.00
	1.16	1.39	0.35	1.39	0.00 – 0.41	9.00
Colombia	1.16	1.39	0.35	1.39	0.00 – 0.41	9.00
USA	1.16	1.39	0.35	1.39	0.00 – 0.41	9.00
	1.16	1.39	0.35	1.39	0.00 – 0.41	9.00
Spain	2.32	1.39	1.16	1.39	0.00 – 0.64	12.00
	2.32	1.39	1.16	1.39	0.00 – 0.64	12.00
	2.32	1.39	1.16	1.39	0.00 – 0.64	12.00
France	2.32	1.39	1.16	1.39	0.00 – 0.64	12.00
	2.32	1.39	1.16	1.39	0.00 – 0.64	12.00
	2.32	1.39	1.16	1.39	0.00 – 0.64	12.00
Panama	1.16	1.39	0.35	1.39	0.00 – 0.41	9.00
	1.16	1.39	0.35	1.39	0.00 – 0.41	9.00
	1.16	1.39	0.35	1.39	0.00 – 0.41	9.00

Source: Teleconsult - Un operador y un plan [*An operator and a plan*]
Average variation between April 2009 and January 2011: general reductions of between 22% & 70%

Analysis of tariffs

Latin America - results

- **Outgoing roaming charges are way above costs, and around five to ten times higher than for domestic calls.**

- **This retail market value suggests that charges for incoming roaming or the wholesale market are equally high.**

- **These charges are also around four times higher than charges in Europe for roaming within the European region.**

Applicability of regulation and conclusions

- The situation in Latin America is one of very high roaming charges, with a tendency towards stagnation, as happened in Europe in 2005.

- Given that market forces are not operating, we are of the view that only regulation could resolve this problem, although it would be difficult to apply in the absence of a body with transnational powers as in Europe.

- The way forward could lie in agreements between countries to apply simultaneous wholesale and retail price ceilings.

Mobile termination rates (MTR)

Economic aspects

- Where regulation is in place, mobile termination rates are generally calculated using the long-run incremental cost (LRIC) methodology in its various versions, since it is this which most fully reflects a competitive market.
- In our experience, the economic cost per minute of mobile network termination in modern networks, virtually irrespective of call origin, currently lies between USD 0.035 and 0.055 per minute using LRAIC.
- Since 2001, when regulatory authorities were first required to review the markets in question, Europe has seen intense efforts to reduce these charges through regulation.
- Charges in Latin America are disparate but are generally falling, and correspond to a variety of regulatory regimes.

Impacts on competition I

- With MTR constituting a natural monopoly, most countries regulate their charges in order to counteract the power of the market.
- Given the predominance of CPP on the retail side and CPNP on the wholesale side, users themselves do not see these charges, with operators being able to subsidize traffic originating in their network through interconnection traffic.
- This arrangement assumes that the calling party enjoys the benefits, but does not take account of the benefits enjoyed by the called party. Through the use of caller ID, the call is established when the called party also sees it to be of benefit.
- European regulators consider the BAK model to be advantageous since it transfers cost recovery from the monopolistic interconnection market to the end services market.

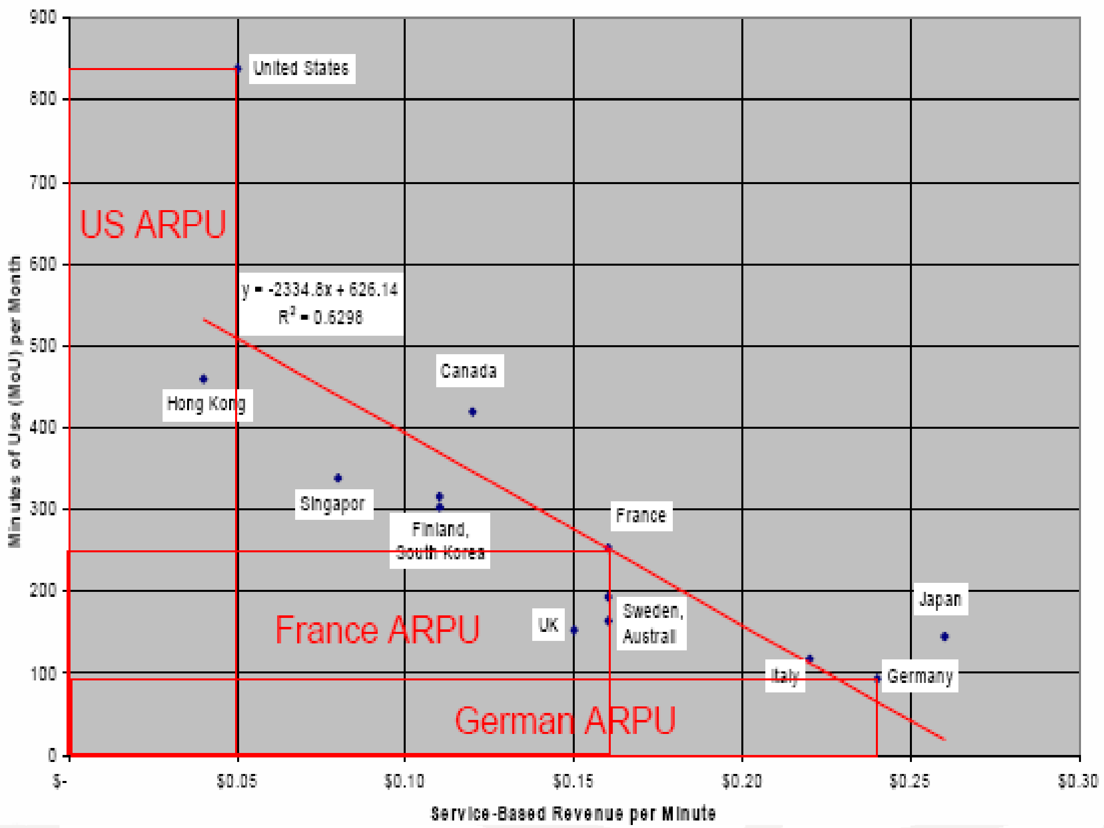
Impacts on competition II

- Also to be borne in mind are aspects relating to the symmetry between different networks and between different operators having the same type of network.
- Symmetry between different networks is also known as reciprocity, which takes on a special character where the two networks are of different types, namely fixed and mobile. The costs for each network are different, but in the United States, for example, reciprocity is imposed for local calls.
- With symmetry, an operator receives the same termination payment irrespective of the domestic network of origin, be it fixed, mobile or long-distance.
- Very few countries impose reciprocity, with the majority opting in favour of symmetry, where it is to be noted that fixed-network charges are lower than mobile.

Impacts on competition III

- Termination charges are of strategic and competitive significance between operators.
- Where they are higher than efficient costs, they give rise to transfers between markets and fixed and mobile consumers.
- They can have a considerable impact on new-entrant operators and can constitute a mechanism for joint market dominance.
- They also prevent operators from freely initiating schemes that involve the use of interconnection, such as flat rates or lower-charge periods, owing to the risk inherent in the high prices for interconnection.

Impacts on competition IV



This graph shows how high termination rates result in high end charges, reducing both usage (MoU) and well-being.

These are representative developed countries, and a high coefficient of determination is observed.

Source: J. Scott Marcus, WIK-Consult

Regulation in Europe I

- A new recommendation relating to fixed and mobile termination was issued in May 2009, advocating the application of a precise methodology in a context of cost reductions not yet transferred to the market.
- The Commission's stated objective is to achieve an average mobile termination charge of between USD 0.021/min (EUR 0.015/min) and USD 0.041/min (EUR 0.03/min) by the end of 2012.
- By mid-2009, the EU average was EUR 0.064/min (USD 0.089/min).
- Includes a more precise description of the calculation methodology, relevant increments, efficient technologies, etc.
- Charges will be established on the basis of the costs incurred by an efficient operator and will be symmetric
- The basis will be current costs, using the bottom-up and LRIC methodologies.

Regulation in Europe II

- Incremental costs are defined as “those that can be avoided if a specific increment is no longer foreseen (also known as avoidable costs)”.
- This condition is particularly relevant when it comes to reducing charges.
- The results of the bottom-up and top-down methodologies should be compared in the interests of consistency.
- Where mobile is concerned, an NGN network is used in the 2G and 3G core and access points.
- Exceptions are made for new-entrant operators for a maximum period of four years.
- Alternative methodologies are accepted if the authority does not have the necessary resources; however, the resulting value must not exceed the average of the values obtained by other NRAs using the methodology defined in the recommendation.

Regulation in Europe III

- Where charges between fixed and mobile are concerned, a number of regulators, among them Ofcom, are considering a switch to reciprocity including the use of BAK beyond 2011.
- They are concerned at the passing on of costs to called subscribers, who in some cases may be low consumers.
- In February 2010, Belgian regulator BIPT announced that application of the new regulations would bring the mobile termination charge down to around EUR 0.015/min by 2013. It is the first regulator to take this step within the new regulatory framework.
- It is hoped that application of the avoidable costs rule will have a significant reducing effect, particularly in next-generation networks.

Regulation in Latin America

- The GSR 2009 Discussion Paper, entitled “Mobile termination rates – to regulate or not to regulate?”, refers to the Americas as the most liberal region with regard to MTR regulation.
- According to the ITU Survey on Tariff Policies 2009, in over half the countries of the region MTRs are determined through negotiation between operators, with regulatory intervention solely in the event of dispute.
- Where MTRs are regulated, a cost-oriented approach is used.
- In contrast to the MTR situation, fixed termination rates (FTR) are more strongly regulated.
- Looking at the current situation in the different countries, there is no sign of any strong move in favour of passing the effects of cost reductions on to the market, as is the case in Europe.

Conclusions

- The reduction of roaming charges and mobile termination rates is a key factor in improving the efficiency of the sector and well-being of the population.
- In the vast majority of the countries of the Latin America region, there is no sign of any action or work aimed at addressing these points with a view not only to reducing current charges but also to reflecting in those charges the savings brought about through the introduction of NGNs.
- Given this situation, it is considered difficult to achieve values that are similar to those prevailing in more developed countries, even without taking into account the differences in terms of economies of scale and other aspects.