

Regulatory Policy towards Mobile Termination

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Introduction

In this short paper, I set out an approach to the regulation of mobile termination rates which has been widely adopted within Europe, especially with the European Union, and which in my opinion is a) consistent with general principles of regulatory economics and b) proportionate in relation to the remedies which it proposes. Because the analysis is now extremely familiar, I set it out briefly in order to draw attention to the logic of the arguments. Longer explanations are available in numerous regulatory publications, which also summarise the counter-arguments adopted (normally) by the mobile operators.

The particular implementation which I describe is based upon current EU-wide legislation for the regulation of electronic communications services, which came into force in 2003.¹ In essence, it requires national regulators to establish a number of market definitions for telecommunication services, based upon a list contained in

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¹ For details see P. Buiges and P. Rey (eds) *The Economics of Anti-Trust and Regulation in Telecommunications: Perspectives for the New European Regulatory Framework*, Edward Elgar, 2004.

Recommendation² from the European Commission; to analyse those markets in order to establish if there are dominant firms; and – if so – to apply appropriate remedies. I find this particular combination of ‘competition law’ analysis (market definition, market analysis, remedies) appealing, especially as it maintains the possibility for *ex ante* intervention to deal with particularly intractable competition problems. It bears a similarity to the New Zealand legal framework, under which markets not characterised by effective competition can be regulated. My review focuses upon the termination of fixed to mobile calls, the main pre-occupation of TelstarClear, but I also refer in places to the slightly different issue of terminating mobile to mobile calls.

Market definition to mobile termination

It seems unnecessary to rehearse the arguments relating to market definition in detail, since the Issues Paper concludes, in line with European regulators (and Vodafone’s views, expressed in the UK), that the supply of wholesale termination on each mobile network in New Zealand is a separate market. (The arguments are summarised in the European Commission’s Recommendation on Relevant Markets, noted above.³) This applies to the generality of customers. In cases where calling and called parties have a common interest in limiting the total cost of calls to mobiles – for example when they are employees of the same firm- special tariffs can be offered, which (implicitly) apply lower termination rates to such customers. As well as rejecting the notion of a multi-operator

² Reprinted in *op cit* in fn 1.

³For similar reviews of the arguments in the context of the UK and Ireland, see Ofcom *Wholesale Mobile Voice Calls Termination Statement*, London, June 2004, and Commission for Communications Regulation, *Response to Consultation and Notification to the European Commission – Wholesale Voice Call Termination on Individual Mobile Networks*, Dublin, June 2004.

termination market, the 'single operator' market definition eschews the cluster market approach at one stage adopted by the ACCC, which brigaded mobile termination with outgoing calls. This definition does not seem to have attracted support from regulators elsewhere, in part because, contrary to normal practice, it combines services at different functional levels, retail and wholesale.

The Commission also correctly identifies the significance of the level of competition in downstream retail market as an 'affected market'. I return to this in the discussion of remedies below.

Market analysis

If the market is correctly defined as termination on individual mobile network, the issue of whether it is effectively competitive can be dealt with fairly speedily. Each operator is an authentic monopolist, and its ability to raise price will in practice only be constrained by countervailing power.

Because interconnection is a two-way process, we might expect operators to agree reciprocal termination rates which would recognise their interdependence and the damage which could be done by excessive termination rates in each direction. Absent regulation of mobile termination rates, we might expect mobile operators to reach mutually acceptable agreements which would not involve monopoly pricing.⁴

⁴ The theory of two-way access pricing is discussed in M. Armstrong, 'The theory of access pricing and interconnection' in M. Cave *et al* (eds) *Handbook of Telecommunications*, Elsevier, 2003, pp. 350-379.

In the case of agreements between fixed and mobile networks, however, one side – the fixed operator - is already subject to regulation. Given that termination rate, the mobile operator has no incentive to abate its unregulated rate to below the monopoly level. In the case of fixed to mobile calls control of mobile termination rates thus eliminates the harmful consequences of the current regulatory asymmetry.⁵ I thus concur with the conclusion in the Issues Paper that the markets for mobile termination in New Zealand ‘may not be subject to effective competition’ (para 125).

The Issues Paper also discusses ways of establishing the margin on mobile termination rates. Clearly, comparing one country’s unregulated termination rates with similarly unregulated rates in other countries risks leading to the conclusion that no country is ‘out of line’ –but this is evidence of the ubiquity of non-competitive rather than competitive rates. Moreover, operators in many European countries seem to have been subject to unofficial regulatory pressure which has forced them to bring down their rates to some degree or face explicit cost-based regulation. The result has been some abatement of monopoly prices, normally accepted by all major mobile operators –but not necessarily the smaller ones – in any country where the pressure is applied.

The Issues Paper also discusses the interesting possibility of proxying mobile termination rates by taking one half of the retail price charges in New Zealand for on-net mobile calls. This approach merits further examination, which will require analysis of the

⁵ See O. Bomsel, M. Cave, G. Le Blanc and K. H. Neumann, *How mobile termination charges shape the dynamics of the telecom sector*, Cerna, Paris, 2003, available at <http://users.wbs.warwick.ac.uk/group/cmur/>

competitive dynamics of the outgoing mobile market-place. Account must also be taken of the possibility, if a contemporaneous linkage is decreed, that operators will simply raise on-net retail tariffs, keeping termination rates high.

Remedies

This brief review of experience of regulatory termination rates concludes with a discussion of remedies.⁶ It starts from the assumption that mobile operators have been found to exercise dominance as actual rather than hypothetical monopolists in their own markets. In such circumstances, profit maximisation would normally lead them to set a monopoly price, though, as suggested above, such behaviour might be modified by a willingness to abate prices in order to avoid or defer regulation.

Such high termination rates are likely to lead to some or all of the following detriments – to productive efficiency, as competitive or regulatory inducements to cut costs will be absent; to allocative efficiency, as the prices of fixed to mobile (and possibly off-net mobile to mobile calls) will be elevated; and to dynamic efficiency, as mobile operators will be content to stick with existing technologies which yield excess profits on call termination.

Under the European regulatory regime, a variety of remedies has been identified to deal with dominance on the part of operators providing access or interconnection services. In

⁶ For a more general discussion see T.Valletti, ‘Obligations that can be imposed on operators with significant market power under the new regulatory framework for electronic communications’, *Journal of Network Industries*, 5, 1 (2004).

practice, however, where regulators have published remedies they have adopted some form of cost-oriented pricing as the underlying instrument combined with other obligations.⁷ I shall therefore focus on the implementation of this remedy.

The natural approach to adopt is to form an estimate of the long run incremental cost of termination on an efficient mobile network, using a top-down or bottom-up cost model (or a combination of both approaches). This permits the recovery of costs causally attributable to the supply of mobile termination, but not of the fixed or common costs of the firm's operations. Some of these costs (such as bad debts from retail operations) will have nothing to do with wholesale transactions and should not be recovered at the wholesale functional level. Handset subsidies are an issue which may be better dealt with explicitly through an analysis of network externalities discussed below. Even with these subtractions, there will remain a residual amount of 'wholesale fixed costs'.

Arguments have been made for setting margins to recover such fixed costs according to Ramsey principles, on the footing that this will, by definition, produce a better outcome than the principal alternative of setting an equi-proportional mark-up. It is worth emphasising that there is no necessary connection between the Ramsey price level for termination, designed to allow efficient cost recovery in a 'zero excess profit' environment and the monopoly price which an unregulated provider of termination services – seeking to make a positive excess profit – would charge. In other words, a

⁷ See Commission for Communications Regulation, *Consultation on Remedies – wholesale voice termination on individual mobile networks*, Dublin, June 2004.

Ramsey price would have to be set by a regulatory process; it would not emerge in an unregulated market.

I am sympathetic to regulated Ramsey pricing for termination, subject to two quite stringent conditions:

1. that agreement can be reached over the relevant elasticities, to a standard which satisfied the Commission's evidential requirements. Experience in the UK suggests that this might be quite difficult.⁸ The Commission has itself recently considered this issue, concluding that demand elasticity estimates were not sufficiently robust and reliable to support the use of Ramsey pricing approaches in calculating TSO charges;⁹
2. that the Commission is satisfied that competitive conditions in the outgoing mobile market are sufficiently robust that all supernormal profits are eliminated and that outgoing services are also subject to Ramsey pricing. If the former condition is not satisfied, then the higher margins on mobile termination accrue, at least in part, to shareholders, rather than lower the prices and encourage the more efficient consumption of relatively price-elastic outgoing services. If the latter condition is not fulfilled, we are in a 'third best' situation where, given the complex demand interdependencies among mobile services, there is no guarantee that setting Ramsey price levels for mobile termination will enhance welfare. I have not conducted a detailed analysis of the competitive conditions in the outgoing mobile market in New

⁸ See Competition Commission, *Vodafone, O2, Orange and T-mobile, 2002, Chapter 8*, pp. 205-224.

⁹ Commerce Commission, *Determination for TSO Instrument for Local Residential Service for period between 20 December 2001 and 30 June 2002*, December 2003, pp. 110-114.

Zealand, but based upon my experience of mobile markets with similar structures and the observations made in the Issues Paper at para 140, I would be surprised if the Commission concluded that the New Zealand market was so fully competitive as to enforce a 'zero profit constraint'. In other words, the case for Ramsey pricing would fall at the first hurdle.

Finally, there is the question of whether, or how, to take account of networks externalities. As with the case of Ramsey pricing, there is no basis for believing that existing prices, aimed at quite different objectives, will embody the appropriate mark-up, so that a regulatory determination will be necessary.

The Issues Paper reports the view that the externality adjustment ceases to be appropriate when subscriber penetration levels are high. The counter-argument is that reduced termination rates will lead to lower handset subsidies or higher outgoing call rates, and these will push existing mobile subscribers off the network. I have already expressed some scepticism in relation to the first part of this chain of reasoning – namely that competitive pressures in outgoing services are so acute that, in order to break even, operators will have to recover reduced termination revenues dollar for dollar in the outgoing market. I am also unsure whether the factors governing the initial decision to subscribe to a mobile network work symmetrically in reverse for existing subscribers. The alternative possibility is that the act of subscription has changed subscribers' tastes, so that they will stay on even as prices rise – possibly replacing their handsets less

frequently. Data from episodes when handset subsidies have fallen can address this point.

It is also relevant that the calculations needed to take account of network externalities are extremely difficult and contentious.¹⁰ They are less tractable even than those required to estimate Ramsey prices, since by definition no market data are available to substantiate the scale of an externality. The Commission may decide either that no adjustment is appropriate in principle or that data of the quality necessary to implement it are not available.

Conclusion

In this note, I have set out some conclusions which regulators in other countries have drawn in relation to the regulation of mobile call termination, together with a brief review of part of the underlying reasoning. I have not addressed all of the questions set out in the Issues Paper. I suggest that in countries with the calling party pays (CPP) system, there is a growing consensus among regulators in favour of cost-oriented pricing for fixed to mobile termination as the appropriate regulatory instrument, together with a substantial degree of agreement as to how it should be implemented.

¹⁰ See Competition Commission, *op cit* in fn 8, Chapter 8 pp. 225-257.

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Selected Recent Publications

Review of Radio Spectrum Management, DTI and HMT 2002

(Edited with S. Majumdar and I. Vogelsang) *Handbook of Telecommunications Economics* (Vol. 1), North Holland, 2002

(With R W Crandall) *Telecommunications Liberalization on Two Sides of the Atlantic*, Brookings Institution, 2002

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