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How to regulate new markets? Innovation and competition in the EU electronic communications framework

Daan Vrijmoet and Jonas Rosenstok, Chief Economist and Economist respectively, at OPTA, the Dutch postal and telecoms regulator, suggest how national regulators should deal with new and innovative markets. This challenge is currently faced by all telecoms regulators, and will be an issue when the new EU regulatory framework for electronic communications is up for review in 2006

In July 2003 a new regulatory framework (NRF) came into force, forming the basis for all sector-specific regulation of the electronic communications industry in the EU. The NRF requires national regulatory authorities (NRAs) to identify markets subject to ex ante regulation—to determine whether any operators in these markets have the ability to exert significant market power (SMP)—and then to impose proportionate ex ante obligations on such operators to prevent anti-competitive behaviour.[1] In developing this regulatory framework, the European Commission recognised that such an approach can lead to problems when applied to new and emerging markets (or infant markets), as the market leader in these markets is likely to have a substantial market share advantage. The Commission therefore advises in paragraph 15 of its Recommendation that:[2]

> new and emerging markets, in which market power may be found to exist because of 'first mover' advantages, should not in principle be subject to ex-ante regulation.[3]

However, the Commission does not provide a definition of what constitutes an emerging market; nor does it give clear guidance on the circumstances in which ex ante regulation might be appropriate. As a result, the emerging markets concept has received little attention from regulators.

This article argues why this lack of attention may lead to over-regulation and regulatory insecurity, which harms investment in the sector. It then suggests an approach to dealing with emerging markets and draws some lessons that are applicable to the future regulation of all electronic communications markets (which will be under discussion in the review of the regulatory framework in 2006).

Over-regulation

The Commission's remarks on emerging markets allow the formulation of the following working definition of an emerging market.

> **An emerging market is any relatively new market in which there is insufficient information (for example, in terms of demand, pricing, price elasticity and entry behaviour) to carry out the necessary market definition procedures and/or tests as to whether the market is susceptible to ex ante regulation.**

This negative definition ends the discussion on emerging markets before it has started. If market definition is not possible, the NRF cannot be applied, so emerging 'markets' will not be regulated. However, in the NRF, the starting point for the NRAs' market analyses is the list of 18 markets pre-defined by the Commission. As pointed out by Oxera,[4] the starting point for a hypothetical monopolist test is crucial for the outcome.[5]

Emerging 'markets' in the electronic communications sector are almost always related to existing infrastructure or services. They often involve multi-service platforms that aim to offer both established and new services. Consequently, many emerging 'markets' are intertwined with existing markets. A technologically neutral approach

This article was written by the Economic Analysis Team (EAT) of OPTA. EAT is responsible for developing economic reasoning and stimulating discussion on key issues within the telecoms and postal markets. The analyses and conclusions expressed by EAT do not necessarily reflect the opinions of the Commission of OPTA. As such, the opinions of EAT, in whatever shape or form, do not have legal status. Quotes from and references to this article can be made freely, provided that such quotes and references sufficiently express the preliminary character and purpose of this article. Daan Vrijmoet no longer works for OPTA.

(a key principle of the NRF) can therefore lead to over-regulation in the case of emerging markets involving new infrastructure, since it could lead to regulation of existing services on new infrastructure that is similar to the regulation of these services on the old infrastructure. One solution to this problem is to apply remedies to the emerging aspects of a market that differ from those applied to the established aspects.

Under-investment

Ex ante regulation of emerging 'markets' might also stifle investment. Emerging 'markets' in electronic communications are characterised by technological innovations requiring high and risky investments in multi-service platforms that offer both established and new services. The incentives for investing in these new platforms depend in part on if, and how, the (emerging) services that are to run on them are to be regulated. There is a risk that, if established services running on new infrastructure are regulated in the same way as those running on legacy infrastructure, the investment required to achieve the welfare gains from investments in new platforms will not be made efficiently. Hands-off policies with respect to new infrastructures would give operators appropriate investment incentives. Jurisdictions such as the USA, Hong Kong and Australia (where approaches regarding emerging markets are already established) take an infrastructure approach rather than a market-oriented approach to regulation of emerging market problems, and are more 'hands-off' with respect to new infrastructures.

However, in a European context, commitment to a completely hands-off policy is not credible, since it does not deal with the problem of foreclosure of competition, a key element of the NRF. If there were no regulation of new, technically non-replicable infrastructure,[6] an NRA would have to rely on pure inter-infrastructure competition in the long term (ie, competitive pressure from different infrastructure with similar capabilities). Incumbents could roll out their unregulated next-generation networks, which would gradually replace their regulated legacy infrastructure. A non-credible commitment from the NRA does not do much for regulatory certainty or, therefore, for future investments.

Regulating non-replicable assets

It is worthwhile assessing whether the dilemmas described above could be tackled by focusing strictly on non-replicable assets. Such an approach identifies assets used by new technology platforms that are non-replicable (either technically or functionally[7]), and focuses ex ante regulation on competition issues arising from such non-replicability.[8] With the non-replicable assets approach, an NRA can simultaneously create a climate that does not stifle investments and deal with competition foreclosure issues.

In light of the upcoming review of the regulatory framework, such a regime could be considered because the non-replicable assets approach focuses on dealing directly with the problem of investment incentives by concentrating on regulation of infrastructure bottlenecks rather than regulation of markets. The approach deals with the re-monopolisation problem. Entrants have access to non-replicable assets on appropriate, regulated supply terms. They are subsequently able to use these assets, in combination with replicable assets that they acquired themselves, to compete in the supply of new technology services at the retail level. This approach allows NRAs to regulate emerging markets with greater confidence. NRAs do not need to predict completely what new services will run on new technology platforms.[9] Instead, they can consider the investment plans of the main operators; decide where, if at all, the services involve the use of non-replicable assets; and, if structural competition issues are deemed to arise, impose remedies accordingly. The non-replicable assets approach is consistent with the principle that it is more important to maximise dynamic efficiency gains from technology innovation in the telecoms industry than to maximise welfare gains from static efficiency.

In practice, however, it may be difficult to determine with certainty that an asset is not replicable, due to the dynamic nature of the electronic communications sector. The fact that assets have not yet been replicated does not exclude the possibility that they are replicable and will be replicated in the (near) future. It is therefore necessary for an NRA to be forward-looking in its analysis of the possible non-replicability of assets. In view of the fact that we are often dealing with large infrastructure investments and long-term trends such as network convergence, the time horizon will often be significantly longer than the regulatory period of 2–3 years,[10] and should therefore be decided on a case-by-case basis.[11] If the asset is not considered replicable within the relevant time horizon, an NRA can deem the asset non-replicable. Such a decision should be reviewed periodically.

Furthermore, assessing the replicability of assets depends on the services the asset is used for. For example, fibre optic cable to the home might seem economically and technically non-replicable considering the enormous capacity and significant one-off investment, but if the consumer demand for bandwidth does not exceed 50Mb/s for the coming years, several alternatives are already available.[12] A non-replicable asset approach is therefore not a purely infrastructure-based approach, as the capability to provide specific services affects the assessment of replicability of the asset.

Consequences of the non-replicable asset approach

In a reviewed regulatory environment, if an asset is regarded as replicable, or is expected to be within the relevant time horizon, no or limited ex ante regulation will be warranted. Of course competition law will be fully applicable. Replicability of assets does not exclude the possibility that one firm has a strong market position to begin with. However, because of replicability there is confidence in the sustainability of competition in the future. The NRF leaves room for a similar conclusion, and remedies during the regulatory period might be limited if competitive pressure is expected in the longer term. However, the NRF gives incentives to tackle competitive problems if these are not solved within the regulatory period of 2–3 years. Therefore, even though a hands-off approach is possible under the NRF, it is unlikely. The non-replicable asset approach does not necessarily require another regulatory framework, but it does require NRAs to have a more long-term perspective and more confidence in competitive pressure from alternative infrastructures.

The European Commission can encourage NRAs to take a longer-term view of regulation by focusing on bottleneck infrastructures when they review the markets that are subject to ex ante regulation. The focus on these wholesale markets would be in line with the concepts introduced by the Commission in the NRF.

Conclusions

The emerging market concept should be made operational to ensure that innovation and timely investments in infrastructures and services are not needlessly discouraged by the regulatory environment. An approach that focuses on (non)-replicability of assets seems a promising way forward and there is no reason to limit it to emerging markets.

A non-replicable assets approach leads to a light-touch regulatory policy, but prevents re-monopolisation, for three reasons.

– The approach is more forward-looking than current regulatory policy.

– There is less 'market making' by regulators and more confidence in market forces.

– The current trend of convergence of most electronic communications markets is creating more inter-infrastructure competition. The specific service markets are rapidly losing their significance; what counts are the capabilities of underlying infrastructure.

With the non-replicable assets approach, regulation focuses specifically on the infrastructure bottlenecks that distinguish the electronic communications sector from other sectors that do not require ex ante regulation.

The clear long-term signal to the market should be as follows: ex ante regulation limited to non-replicable assets in combination with general competition law is the best method to ensure that investment incentives are not hampered by the regulatory environment.

Daan Vrijmoet and Jonas Rosenstok

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[1] For an analysis of the NRAs' market reviews, see *Agenda* (2005), 'The EU Electronic Communications Framework: Is it on Track?', April, available at www.oxera.com.
[2] European Commission (2003), 'Recommendation on Relevant Product and Service Markets within the Electronic Communications Sector Susceptible to Ex Ante Regulation in Accordance with Directive 2002/21/EC of the European Parliament and of the Council on a Common Regulatory Framework for Electronic Communication Networks and Services', C(2003)497, February 11th.
[3] At the same time, the Commission is concerned to prevent foreclosure of competition in emerging markets. Hence it does not ban ex ante regulation completely; rather, it advises NRAs to ensure that they can fully justify early ex ante regulation in an emerging market, given that they retain the ability to intervene at a later stage.
[4] See *Competing Ideas* (2005), 'The SSNIP Test: Some Common Misconceptions', Oxera, March. Available at www.oxera.com.
[5] For example, when analysing market 3: 'Publicly available local and/or national telephone services provided at a fixed location for residential customers', one could conclude that voice over broadband (VoB) services are within the same market. Taking VoB as the starting point for analysis, one might conclude that this is an emerging market, since it also fulfils many aspects of the above definition.
[6] Non-replicable infrastructure is infrastructure that cannot be commercially replicated once the first-mover has established it. If the functionality of such infrastructure is also non-replicable (by alternative technology), this infrastructure can lead to a position of natural monopoly.
[7] Technical replicability refers to actual replicability of the infrastructure. Functional replicability refers to replication of function, without necessarily replicating the infrastructure.
[8] Competition issues generally arise only if the owner of the non-replicable assets has SMP in a related market.
[9] For example, whether a triple-play bundle (including TV, telephony and Internet access) is in a separate market from its component parts offered over legacy infrastructure.
[10] Determining the relevant time horizon on a case-by-case basis should of course be based on real prospects of expected replication, and not be of a purely speculative nature.
[11] See footnote 37 of European Commission (2002), 'Commission Guidelines on Market Analysis and the Assessment of SMP under the Community Regulatory Framework for Electronic Communications Networks and Services, OJ, 2002/C 165/03. http://europa.eu.int/information_society/topics/telecoms/regulatory/maindocs/documents/c_16520020711en00060031.pdf.
[12] Both the cable and telephony networks are expected to deliver speeds of up to 100Mb/s using current technology (VDSL and Ethernet to the Home).

If you have any questions regarding the issues raised in this article, please contact the editor, Derek Holt: tel +44 (0) 1865 253 000 or email d.holt@oxera.com

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