



Imposition of remedies under the New Regulatory Framework

May 2003

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Principles for the imposition of remedies under the New Regulatory Framework

Introduction

The Commission has announced that it intends to publish Guidelines for National Regulatory Authorities (NRAs) on the imposition of SMP-remedies under the new Directives for electronic communications networks and services. Deutsche Telekom welcomes the Commission's initiative to provide guidance to NRAs to create a proportionate framework for regulatory action on electronic communications markets.

Both the Access Directive (22/2002/EC) and the Universal Service Directive (19/2002/EC) provide for a range of regulatory instruments that NRAs "may" apply where justified and proportionate in order to remedy an identified market failure. Under the new Directives, the guiding principle for the imposition of specific remedies is the principle of proportionality. In view of the wide discretion that NRAs enjoy under the new Directives, guidance by the Commission on how this principle will be applied and which minimum set of criteria should be examined by NRAs when imposing remedies would be most helpful.

With the present paper Deutsche Telekom would like to propose an economics based approach to the choice of specific remedies in the legal context of the New Regulatory Framework. The paper will recall the objectives NRAs will pursue when imposing SMP-obligations and point to the importance of the situation on retail markets for determining regulatory action both at wholesale and retail level. As a core element to any proportionality test, Deutsche Telekom proposes a cost-benefit analysis as a prerequisite for sector-specific intervention on electronic communications markets. The Annex A to the paper will describe a methodology for a cost-benefit-analysis that will help to evaluate the real benefits and costs of regulatory intervention on electronic communications markets.

1. Remedies in the systematic of the NRF

1.1 Starting point for the imposition of remedies

The question of imposition of specific remedies becomes relevant after NRAs, together with the Commission under the procedure laid down in Art. 7 Framework Directive (21/2003/EC), have defined relevant markets susceptible to sector-specific regulation and identified one or more dominant ('SMP-') operators on those markets. Under the terminology of the New Regulatory Framework this procedure laid down in Art. 15 and 16 Framework Directive is called market analysis procedure. In this context, NRAs, together with the European Commission, will have examined certain characteristics of the market in order to ascertain whether a market can be identified for the application of sector-specific regulation and in order to determine the existence of SMP/dominance.

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A decision on the imposition of sector-specific obligations then requires further analysis of the market situation, including *inter alia* a thorough examination of market outcome at end-user level (see below, pt. 3). Since under the new EU regulatory framework there is no longer an automatic imposition of certain obligations on SMP-operators, the detailed evaluation of the market situation against the background of the proportionality test including a cost-benefit analysis will be a cornerstone in future regulatory proceedings.

1.2 Sufficiency of competition law - a reoccurring principle

A major achievement of the New Regulatory Framework is the principle that sector-specific rules shall only apply where general competition law remedies are not sufficient to address the problem.¹ Generally, this issue is best dealt with in the context of the market analysis, i.e. before addressing the imposition of specific remedies. The decision on the application of sector-specific vs. general competition law rules should be the first step in the market analysis procedure. This creates legal certainty for market participants as to which rules apply on a market and allows a full transition to general competition law on those electronic communications markets that no longer justify the imposition of sector-specific remedies.

In principle, the Commission has opted for this approach. In its first Recommendation on relevant markets from 11.02.2003 it has established three cumulative criteria² which have to be fulfilled in order for sector-specific regulation to be justified. The Annex to the Commission Recommendation includes all markets covered by the existing ONP-Directives and additional markets included in Annex I of the Framework Directive as the Commission, for its first Recommendation, felt it was bound by the Annex with regard to the scope of sector-specific regulation. It appears that this has led in some cases to a less rigid analysis of markets in the light of the 3 criteria which the Commission now foresees for the future reviews of the list of markets³. We feel that the analysis of markets in the explanatory memorandum to the Recommendation often remains unsatisfactory and does not sufficiently take into account sufficiency of competition law.

For the time being, the discrepancy between the principles of the framework and the actual scope of markets identified for sector-specific regulation remains.⁴ Therefore, as long as sufficiency of competition law is not examined in detail either at European or at national level, NRAs will have to take into consideration in every market situa-

¹ cf. Recital 27 of the Framework Directive

² (i) existence of high durable barriers to entry, (ii) lack of dynamic competition (no tendency to effective competition) and (iii) insufficiency of competition law remedies to solve problems on those markets
³ cf. Rec. 16 of the Recommendation

⁴ It is also far from certain, whether at national level a thorough analysis by NRAs of the criteria for application of sector-specific regulation will take place. However, such an analysis becomes necessary where an electronic communications market at national level does not satisfy the three criteria even though it is listed in the Annex to the Recommendation, i.e. where an NRA finds that at national level there are either no high durable barriers to entry or the relevant markets tends towards effective competition or competition law remedies suffice to address the possible market failures.

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tion whether competition law remedies may suffice to solve the problem in the market before sector-specific remedies can be imposed. This applies especially to markets which have evolved in a competitive environment and have distinct market characteristics from the traditional fixed telephone network. This is the case for mobile markets which have been characterised by infrastructure competition from the beginning and have developed favourably without “core economic regulation” for more than a decade, e.g. in Germany.

1.3 Nature of remedies

The New Regulatory Framework in the Access Directive and the Universal Service Directive sets out a number of regulatory instruments which NRAs “may” impose on SMP-undertakings to address particular competition problems in the market. These possible regulatory instruments may include obligations to grant access to, and use of specific network facilities, in other words to meet reasonable requests for relevant wholesale products (Art. 12 Access Directive). Art 9-11 and 13 of the Access Directive define a set of possible obligations NRAs may impose alternatively or in combination with an access obligation. Possible ‘remedies’ at retail level are outlined but not further specified in Art. 17 Universal Service Directive.

2. Pursuing the right objectives – specifics of SMP-regulation

Before evaluating the proportionality of a measure, it is important to lay down which objectives NRAs may legitimately try to achieve by imposing obligations on SMP-operators.

SMP-regulation under the NRF is economic regulation. The justification for sector-specific intervention vis-à-vis SMP-undertakings is to maximise economic benefits where intervention is justified and proportionate. Under Article 8.2 of the Framework Directive

“The national regulatory authorities shall promote competition in the provision of electronic communications networks, electronic communications services and associated facilities and services by inter alia:

- (a) ensuring that users, including disabled users, derive maximum benefit in terms of choice, price, and quality;*
- (b) ensuring that there is no distortion or restriction of competition in the electronic communications sector;*
- (c) encouraging efficient investment in infrastructure, and promoting innovation;”*

These objectives constitute the framework for sector-specific SMP-regulation. Lit. a) focuses on market outcome at end-user level, giving guidance as to what can be qualified as a market failure and lit. b) refers to the notion of restriction or distortion of competition. In lit. c) the Directives explicitly recognise the importance of safeguarding incentives for investment in infrastructure and innovation on electronic communications markets.

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In paras 3 and 4 of Art. 8 Framework Directive, further objectives are laid down, namely the development of the internal market and the promotion of the interests of EU citizens *inter alia* with regard to universal service obligations and consumer protection. These objectives are pursued in particular by the consultation and consolidation procedure (Art 6, 7 Framework Directive) as regards the development of the internal market and in Art. 3-15 and 20-34 of the Universal Service Directive as regards the promotion of the interests of European citizens. They may exceptionally play a role in the context of SMP-obligations⁵. Yet, it is important that they do not distort the rationale behind SMP-regulation contained in Art. 8.1 and 2 lit. a-c Framework Directive. Otherwise a consistent imposition of obligations within the EU would be at risk, as each NRA could adhere to a different set of objectives when imposing remedies, and it would be impossible to calculate costs arising from regulation in view of the objectives pursued.

Therefore NRAs should not pursue, e.g., a universal service goal like affordability of services in the context of SMP-regulation. Equally, the objective of ‘promoting of the internal market’ shall not serve as a justification for a remedy which is not proportionate in view of the national market conditions only because a similar obligation exists in other EU Member States.

3. Retail markets as the starting point for identifying market failure

As discussed above, SMP-obligations shall ensure *“that users, including disabled users, derive maximum benefit in terms of choice, price, and quality”*

This objective, described by the Commission as “key aim” of the NRF⁶, underlines that the imposition of remedies aims at maximising economic benefits where proportionate and justified. In other words, NRAs should act in view of the overall efficiency of communications markets. Fostering of competition should have as objective an optimal market outcome which is constituted by *allocative*, *productive* and *dynamic* efficiency of the market - allocative with respect to the fact that prices should reflect overall costs, productive with respect to minimising cost of productions and dynamic with respect to innovation and long-term optimal investment decisions.

These types of efficiency which ensure choice, price and quality for end-users can only be measured at retail level. The situation on retail markets is therefore decisive for the decision whether to impose, maintain or withdraw remedies at wholesale and/or retail level⁷:

Therefore, when examining wholesale markets, market failure should always be examined in the light of the market outcome of the corresponding retail market(s). Accurate definition and understanding of the corresponding retail market is crucial for a proportionate imposition of remedies also at wholesale level.

⁵ In particular § 4 lit. f (network integrity) in the context of access obligations

⁶ Explanatory Memorandum on the Commission Recommendation on Relevant Product and Service Markets, p. 15

⁷ cf., page 6/7, paragraph 3.1.

The Commission in its Recommendation on relevant markets of 11.02.2003 has adopted a similar approach. The explanatory memorandum sets out that *“the starting point is a characterisation of retail markets, following by a description and definition of related wholesale markets [...]”*⁸. This relation is crucial also with regard to the imposition of remedies in order to avoid unfocused and unnecessary intervention at wholesale level.

4. Proportionality and cost-benefit-analysis

In the light of the objectives pursued (cf. chapter 3 above), NRAs shall carry out a proportionality test for each sector-specific measure envisaged. According to the Commission Guidelines on market analysis and assessment of SMP *“respect for the principle of proportionality will be a key criterion used by the Commission to assess measures proposed by NRAs under the procedure of Article 7 of Framework Directive. The principle of proportionality is well-established in Community law. In essence, the principle of proportionality requires that the means used to attain a given end should be no more than what is appropriate and necessary to attain that end.”*⁹

Under the proportionality test, any measure must be suited to remedy the market failure identified, must be necessary, i.e. the least intrusive measure in view of rights of operators concerned and must not place an undue burden on the operator addressed by the envisaged regulatory measure.

4.1 The need for a cost benefit analysis

In examining the first two criteria of the proportionality test, a cost-benefit-analysis should be carried out as an obligatory step in the process of assessing remedies and as an integral part of the proportionality test. In view of the economic nature of SMP-regulation, the proportionality test *inter alia* “[...] means that intervention is appropriate, no more than is necessary, and, by implication, satisfies a cost-benefit test, in the sense that the expected benefits from the intervention exceed the expected costs.”¹⁰

A cost-benefit analysis

- requires NRAs to clearly define whether and to what extent there is a market failure that they want to remedy,
- will imply a forward looking long term analysis of allocative, productive and dynamic efficiency on a market with and without the envisaged intervention,

⁸ Explanatory Memorandum on the Commission Recommendation on Relevant Product and Service Markets, p. 7-8 and 15

⁹ Commission Guidelines on market analysis and the assessment of significant market power under the Community framework for electronic communications networks and services, para 114

¹⁰ Martin Cave, "Economic Aspects of the New Regulatory Regime for Electronic Communication Services", Discussion paper, 2002.

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- will thereby reveal negative side-effects and costs of market intervention.

Hence, a cost-benefit analysis serves as an important tool for a better regulation through higher accountability of regulators for their action.

Every measure should be analysed with regard to its long term impact on the overall electronic communications market. Measures on an identified relevant market may have repercussions on other markets, e.g., any introduction of additional obligations at wholesale level will affect take-up of existing wholesale products and business models based upon such wholesale obligations where the corresponding retail market is interrelated (e.g. inter-relation between LLU and possible bitstream-access or other access obligations).

The evaluation of economic costs and benefits of regulatory intervention are essential for a rational proportionality test. Any measure that does not satisfy a cost-benefit test must be considered disproportionate.

The Annex to this document will describe a remedies assessment process including a cost-benefit analysis or other assessment methods in case full quantification is not possible.

4.2 Principles of the proportionality test¹¹

In view of an identified market failure, in a first step, NRAs will identify a measure that can be envisaged. Measures in place, having a direct or indirect impact, shall be part of the proportionality test. NRAs will then have to examine whether the following conditions under the proportionality test are fulfilled:

- Is the measure **suitable** to remedy the market failure identified?

Measuring the costs and benefits of a measure as laid out in Annex A is a precondition to establish whether it is a suitable remedy. Where a measure is found to produce higher overall costs than benefits, it must be abolished or, in case of a new obligation, it must not be introduced. Measures that either do not serve to remedy the identified market failure or produce higher costs than benefits are not suitable and therefore not proportionate. This may be the case for requests for access by operators which either are not triggered by a real demand or which prospectively will not contribute to lower prices, more choice or better quality of products for end-customers in the first place. As a result of this examination, the NRA will either find a suitable remedy or come to the conclusion that regulatory intervention would exceed benefits and therefore no action should be taken.

A cost-benefit approach implies that despite an identified market failure the costs of regulatory intervention may outweigh its benefits. As the Australian Productivity Commission's noted in its recent review of the access arrangements under the

¹¹ The process is described in Annex B

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Trade Practices Act: “... *the inefficiency arising from regulatory error may outweigh inefficiencies resulting from unregulated market outcomes, and therefore often justifies no action.*”¹² In Particular, this is the case on emerging and innovation driven markets, which are characterised *inter alia* by new products, short product-lifecycles, market growth, and change in market shares. On these newly emerging markets error costs can be particularly high and NRAs should under all circumstances abstain from interfering where competitive advantages are acquired on the basis of innovation.¹³

Therefore, when deciding on the imposition of sector-specific remedies forbearance is an option for NRAs. The Commission’s current interpretation of the NRF that “at least one remedy has to be imposed”¹⁴ where an undertaking is designated as having SMP should be reviewed in the light of the principles of the NRF. Under such an approach, NRAs would run the risk to over-regulate communications markets, resulting in possible severe losses of benefits for the end-customer. The concept of proportionality will require NRAs to enact forbearance where the costs of sector-specific remedies would outweigh the benefits. The Commission bases its current argument for the imposition of “at least one measure” on Art. 16.4 of the Framework Directive. However, Art. 16.4 Framework Directive speaks of “appropriate obligations” and Art. 8 of the Access Directive stipulates that NRAs “shall impose the obligations set out in Art. 9-13 of this Directive as appropriate” and proportionate (Art. 8 Access Directive). In cases where the costs of regulatory intervention would outweigh its benefits, the only “appropriate” and proportionate choice within the meaning of Art. 8, 16 Framework Directive, Art. 8 Access Directive and Art. 17 Universal Service Directive will be not to impose a remedy.

- Is the measure **necessary**, i.e. the least intrusive for the operator concerned?

The examination of the necessity of a measure requires a classification of remedies in view of its intrusiveness with regard to the operator concerned. I.e., where there are several measures that are expected to produce benefits and remedy the market failure identified and a degree of uncertainty remains as to which of the measures is better suited to address the market problem, the NRA has to chose the measure which is least intrusive in view of the rights of the undertaking concerned. NRAs will have to chose the least burdensome remedy in particular in those cases where costs and benefits cannot be quantified but are ranked on the basis of a set of presumption defined by the regulator (s. Annex A).

¹² Australian Productivity Commission *Telecommunications Competition Regulation: Draft Report* (29 March 2001).

¹³ Cf. Rec. 27 Framework Directive according to which „*newly emerging markets, where de facto the market leader is likely to have a substantial market share [...] should not be subjected to inappropriate obligations.*“

¹⁴ cf. Commission Guidelines, para 114: “*However, merely designating an undertaking as having SMP on a given market, without imposing any appropriate regulatory obligations, is inconsistent with the provisions of the new regulatory framework, notably Article 16(4) of the Framework Directive. In other words, NRAs must impose at least one regulatory obligation on an undertaking that has been designated as having SMP.*“

- No undue burden: is the measure **proportionate in view of the fundamental rights of the operator** concerned?

In a last step, NRAs should identify whether a measure, despite being suitable and necessary to address a market problem, may not constitute an excessive burden for the affected operator. This element of the proportionality test is derived from the dogmatic of fundamental laws of the Member States and under European law. It ensures that interventions in the (esp. ownership) rights of individuals or companies are not excessive even in those cases where no other measure can be envisaged. This test can be relevant, e.g. for obligations for network access or interventions in investment decisions or the structure or ownership of an undertaking.

5. Specifics of regulation on electronic communications markets

5.1 Sunset-regulation

The dynamics of electronic communications markets imply that specific remedies need to be revised regularly in view of market developments. An obligation that was considered necessary at one point may quickly become obsolete in the course of market development. Therefore it is advisable to attach a sunset-clause to remedies where appropriate. At the end of this period which should depend on the circumstances the obligation will be lifted automatically except where the need for continued regulation is positively established by the NRA.

5.2 Subsidiarity of retail regulation

Art. 17 1 b) of the Universal Service Directive establishes the principle of 'subsidiarity' of retail regulation which may only apply where existing access and interconnection obligations do not suffice to achieve the objectives pursued by SMP-regulation.

Therefore, before continuing to apply regulation at retail level, NRAs will have to positively establish which market failure the obligation intends to remedy and why existing wholesale obligations are not suited to address the problem or would do so at a greater overall economic cost. Also the sufficiency of competition law remedies, e.g. for taking account of potential problems like excessive or predatory pricing, should be considered by NRAs (see above pt. 2).

Therefore, subsidiarity of retail regulation is ultimately a consequence of the proportionality principle. Since market failure at retail level is the starting point for identifying appropriate wholesale obligations and wholesale regulation is always targeted at generating a better market outcome for end-customers, generally 'double regulation' of both wholesale and retail level will not satisfy the proportionality test. The imposition of obligations on retail markets can only be justified as a last resort.

5.3 Key requirements to procedure - due process and the burden of proof

In practise, the procedure by which remedies will be imposed is of high importance for market participants on communications markets. Consistency and proportionality of regulation can only be ensured where NRAs are fully accountable for their actions. Furthermore, the parties involved have to be granted their rights in a due process. Transparency of the decisions has to be guaranteed. Predictability and legal certainty are of utmost importance in creating a favourable environment for investments.

The proposed proportionality test including the cost-benefit analysis therefore have to be accompanied by the requirement for NRAs to provide a full reasoning for their decisions. Also, the burden of proof for regulatory intervention naturally lies with the NRA. A legal provision which automatically links a certain market outcome to a specific remedy risks to produce disproportionate regulation. Equally, provisions whereby access to all network elements and facilities is deemed reasonable without an in-depth analysis of the market situation are in breach of the proportionality principle as they shift the burden of proof on the question whether costs outweigh benefits of regulation to the operator concerned.

Annex A - Remedy assessment procedure

The New Regulatory Framework aims at promoting competition. This objective is based on the conviction that only market forces will bring about the most desirable economic outcome to society. Nevertheless, the existence of artificial barriers for competition or other market imperfections may result in a partial failure of market forces to achieve the welfare optimum. Due to the fact that in reality market participants (and even more so regulators) do not have perfect information, markets are to a certain extent inevitably imperfect. In other words, first-best outcomes are a rather theoretical objective. Therefore in those exceptional cases where the market does not generate satisfying 'second-best' outcomes, the objective of regulation should be to set incentives to achieve a competitive environment which will abolish avoidable imperfections. Because regulatory policy can at best achieve second-best solutions, regulators have to select carefully those remedies that may be appropriate to maximise social welfare.¹⁵

Sector-specific regulation can never replace market mechanisms. For that reason, it is essential that NRAs understand the current market situation and analyse the market impact of the interventions they consider. NRAs have to develop methods for assessing market impact. The transparent assessment procedure, which includes a thorough consultation with market parties, should result in maximising benefits for society, and in particular for end-users as stated in Article 8.2 of the Framework Directive. In the following, we will discuss an assessment procedure which establishes whether immediate action should be taken and if so, how to determine the proportionate remedy for an identified market failure.

1. Developing an assessment procedure under the NRF

Before determining a remedy on the relevant wholesale or retail market, NRAs should carry out a market failure analysis. In case of wholesale markets this analysis will not be limited to the relevant wholesale market but focus on the corresponding retail market in order to determine whether market outcome is satisfactory (see above, pt. 3). If market failure at the retail level is caused by wholesale market imperfections then the NRA should focus on keeping in place an appropriate type of access to network facilities. Only in the case where existing wholesale obligations do not suffice to achieve the aims pursued by SMP-regulation, regulation at the retail level can be taken into consideration (cf. 5.2. above).

The 'remedy assessment procedure' by the NRA should therefore start with the identification of existing and – in the case of a substantiated additional request – additional wholesale obligations. In case these obligations include network access the NRA may, where justified, define conditions, under which network access is being provided. Art. 9-11, 13 Access Directive set out a list of possible alternative or addi-

¹⁵ Laffont, Jean-Jacques and Jean Tirole (2000), *Competition in Telecommunications*, Cambridge, Mass., London (MIT Press), p. 37-96

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tional obligations (transparency, non-discrimination, accounting separation, price control). The NRA then either identifies the combination of a suitable wholesale product and an obligations under Art. 9-11 or 13 as best suited to remedy market failure or determines a general obligation such as transparency or non-discrimination as appropriate remedy for a market. As a result of a balanced cost-benefit-analysis the NRA will ascertain with adequate care the remedy which maximises net social benefits and at the same time does not represent an undue burden for the operator concerned.

The process of identifying the proportionate action at wholesale level to be carried out by the NRA can be summarised as follows:

- Start:** Analysis whether a market failure exists which needs to be addressed
1. Identification of existing/envisaged obligation(s)
 2. Cost benefit analysis in order to identify one or more suitable remedies
 - Define a reference scenario of market outcome
 - Scale/rank expected social benefits, if possible quantify monetary values
 - Scale/rank expected social costs, if possible quantify monetary values
 - Weighing of costs and benefits
 3. Determine the least intrusive remedy where several suitable remedies exist
 4. Examine whether measure constitutes undue burden for the operator concerned
- End:** Implementation of proportionate remedy or forbearance

2. Identification of remedies at the wholesale level

If market failure has been identified the NRA should first of all examine the access obligations in place and evaluate their market impact. In the case of fixed network services, the ULL regulation 98/2000/EC and carrier (pre)-selection already offer a set of products for alternative operators which provides for low market entry barriers for competition at retail level. In many cases also freely negotiated wholesale services can be used by competitors to successfully compete on downstream markets.

An obligation to provide a specific wholesale product is not proportionate if it is evident that its implementation can not remedy the identified market failure in the first place. At this stage NRAs also have to examine the effectiveness of access obligation already in place. Furthermore, where NRAs observe that existing obligations are unsuited in achieving the NRF's objectives they must be withdrawn.

NRAs should in each case demonstrate the necessity of their action before adding any further access obligations or applying further conditions. Where existing wholesale products are significantly used by alternative operators to provide services to the

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end-customer, there is *prima facie* no need for further intervention. In particular, as will be discussed later, the repercussions for existing business models must be taken into consideration when imposing an additional access option. Planning reliability and legal certainty are of utmost importance for investments and innovations.

Where they impose access obligations NRAs may establish conditions under which such access should be provided strictly limited to what is necessary and proportionate. The Access Directive describes a set of alternative obligations in Art. 9-11 and 13 which NRAs can impose on different types of network access. These are the Obligation of Transparency (Art. 9) the obligation of non-discrimination (Art. 10) the obligation of accounting separation (Art. 11) and under certain conditions price control obligations (Article 13), which may include squeezing tests, price cap regimes or cost-oriented pricing of individual products. It is not permitted to impose measures that go beyond this set of obligations defined in the Directives except where explicitly agreed to by the Commission, Art. 8.3 Access Directive.

The NRA will then need to examine closely the costs and benefits of imposing one of these obligations. Proportionality can only be assured if NRAs can adequately show that the proposed regulatory intervention leads to a better market outcome, i.e. to greater efficiency.

3. Cost-benefit-analysis: methodology

Cost-benefit-analyses (CBA) are usually undertaken to estimate the equivalent money value of the benefits and costs of public projects to establish whether they are worthwhile, e.g. bridges, dams and highways or training programs and health care systems. Thus, a CBA is necessary in situations where the costs and benefits of particular government intervention fall on different parties.

The aim of such studies in the context of regulation of telecommunications markets is to identify and measure the likely costs and benefits in order to assess whether the benefits of taking regulatory action outweigh the expected costs. In other words, such models compare the costs with the welfare to society from market interventions. A positive net benefit indicates government action might be taken. If costs exceed anticipated benefits no regulatory intervention is justified.

3.1. Reference market scenario

The first step of a CBA should be the development of a reference market model or scenario in comparison with the actual situation. NRAs will aim at remedying market failure through the promotion of competition in order to create a better market outcome with respect to choice, quality and prices for consumers. NRAs have to demonstrate how such an optimal market scenario will look like, how to achieve it and measure the gap between target and actual market outcome / outcome without any sector-specific regulation.

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Alternatively, the assessment of costs and benefits can begin with demonstrating what would happen if no regulatory action was taken. In this case costs and benefits are incremental to what would have occurred without any "further" intervention. NRA will measure the costs and benefits resulting from a particular regulatory action. Analysing the market development for the case of "doing nothing" therefore is a fundamental starting point for the cost benefit assessment.

The purpose of regulatory action is setting a framework to achieve the desired market scenario. The most beneficial market outcome to society implies that efficiency exists. The benefits of competitive markets can be divided into three distinct groups, each of which refers to a particular type of efficiency. These are:

- **Allocative Efficiency**, which occurs when overall prices level reflects the overall costs of supply, including a reasonable rate of return on capital employed. This type of efficiency has been extensively used by NRAs as justification for intervention, not asking whether optimal utilisation of existing network resources will be brought about by market forces. For example, even in a monopolistic market structure, price differentiation may lead to optimal outcomes. Lower prices itself do not necessarily represent efficient allocation of resources. Although, efficiency gains of this type may be predictable the repercussions by setting prices which will not cover all costs, in particular the costs of capital, will affect the other two types of economic efficiency.
- **Productive Efficiency**, which occurs when supply costs are minimised through process innovations. Under the Access Directive, regulation should particularly foster incentives to invest (cf. Recital 19 AID). That includes investment in process innovations. The proposed remedy should therefore not destroy incentives for process innovations which minimise the cost of service provision.
- **Dynamic Efficiency**, which occurs if on the basis of product innovations optimal investment decisions are taken. This type of efficiency will ensure in an ongoing process the two forms of economic efficiency discussed above. The market driven improvements will lead to a greater variety of services, more functionality and higher quality of services.

The relevant timeframe for the cost-benefit-analysis must be sufficiently long as to allow for comprehensive analysis of all the above-listed efficiency criteria. To limit the analysis to an overly short period would favour regulatory action aimed at short-term gains in consumer welfare but ignoring long-term benefits from innovation and investment.

3.2 Estimation of costs and benefits

As stated above NRAs have to develop methods to assess adequately real net benefits of proposed remedies. CBA refers to the most accurate method of evaluating governmental interventions in the market place based on monetary values. Quantify-

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ing losses or benefits as a result of the implementation of a specific wholesale product, however, can be a demanding task. While changes in allocative efficiency can be predicted given suitable data, it is more difficult to quantitatively forecast changes in productive or dynamic efficiency.

Productive efficiency improvements can be precisely assessed ex-post, current efficiencies can be compared across suppliers and predictions of the effect that regulation will have on production costs can rather be made 'qualitatively'. Forecasts of the effect of regulation on dynamic efficiency are presumably even less quantifiable. The difficulties involved in predicting the effect of regulation arises from the fact that productive efficiency can only be measured through a comparative analysis – there are no objective criteria that exist independently of other producers. Unless there is an example of a undertaking performing at a particular level of productivity, there will be no evidence that such a level is attainable. Thus, productive and dynamic efficiency should not be assessed on a hypothetical basis but on the basis of verifiable data, e.g. from benchmarking.

The methodology of CBA in telecommunications is evolving recently. Presumably, detailed data and recourses for analysis will sometimes not be available. In those cases other assessment methods for decision making such as scoring models or cost-effectiveness-analysis which are rather qualitative analysis should complement or replace a CBA by assessing the effects of regulatory intervention. These methods have been put into practice by regulators already.¹⁶ Thus, in the case monetary values can not be derived other objective measures should be used. In other words, estimates of costs and benefits should be based on suitable data or plausible reasoning to the extent that data is not available.

Where assumptions were made for the CBA, they should be accompanied by a check on the extent to which the scale of costs and benefits would change significantly if the assumptions were different (sensitivity analysis).

3.3 Possible social costs and benefits of regulation

Carrying out a CBA-analysis one has to precisely distinguish between real costs and benefits to society and a sole redistribution between competitors and consumers. For example the "benefit" of shifting market shares based on regulatory intervention does not lead to overall efficiency gains but only to a redistribution between market participants. Instead, market efficiency considerations have to be at the forefront. The following costs and benefits should be considered by the NRAs:

Benefits

As discussed above, before regulating the provision of services NRAs must show the positive changes of welfare to society. The benefits that occur as a

¹⁶ E.g., the UK regulator Ofcom carries out a so-called regulatory option appraisal (ROA) where advantages and disadvantages are mostly not quantifiable, Cf. Ofcom (2002), Regulatory option appraisal guidelines: assessing the impact of policy proposals, London

result of regulation can be measured by econometric models. Starting point of such analyses is the estimation of the position and slope of the relevant demand curves, since these define the top boundary of overall social surplus possible. Estimates of the costs of production define the lower boundary of social surplus. If monetary values of social benefits are not quantifiable NRAs should alternatively define economic assessment criteria derived from the objectives which can legitimately be pursued by SMP-regulation¹⁷, which reflect distinct qualitative and quantitative characteristics. Such a heuristic method for systematic decision-making must be understandable and carried out in a verifiable manner.

Costs

There are two general groups of costs associated with regulating access to services. The most obvious are the direct costs arising from regulatory activity, comprised mainly of the cost of running the regulator's office and the compliance costs incurred by regulated firms. Secondly, there are costs that arise as a result of inevitable errors made by the regulator, who has only imperfect information about the current and future position of the regulated firm and the industry in which it operates.¹⁸

- **Direct costs**

The direct social cost of regulating a service is the sum across all affected parties of the difference between the costs each would incur under regulation and the costs that they would avoid by absence of regulation. Three main categories of direct costs are identifiable: administrative costs, additional transaction costs and additional investments in networks induced only by regulatory obligations. In detail, this includes the cost of the time devoted by executives, support staff and external contractors, travel and communication expenses incurred, and any legal costs of the NRA, competitors and the incumbent operator associated with regulation. Buying new equipment to fulfil mandated obligations must also be taken into account.

- **Indirect costs**

The indirect costs of regulation arise from errors of several types. First, the reach of regulation may be extended into activities for which the cost of regulation outweighs the benefits. Not a single aspect but the overall market impact of the intervention must be analysed. Negative effects on other markets and the impact on existing sustainable business models must be taken into account. In this context, the most significant regulatory error is merely to transfer wealth between producers and consumers, which does not constitute a change in terms of welfare. The intervention necessary for such transfers

¹⁷ See above, part 1 pt. 2

¹⁸ CRNEC University of Auckland (2000), "The Costs and Benefits of Regulating Electronic Communications Services", Auckland, September

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causes costs in any case and destroys investment incentives. Secondly, while there may be some socially beneficial regulation of the activity at issue, the regulator may err in constraining the operator concerned too much with the result that these potential net benefits are not realised. Both of these errors arise from what can be described as excessive regulation, e.g. setting particular prices for access to increase network utilisation without careful consideration of the impact on investment and innovation.

4. Evaluating expected costs and benefits

Weighing the quantified or scaled costs and benefits of access obligations and/or wholesale conditions or access options in correlation with the access conditions will be the final step of a CBA carried out by NRAs. The necessity of assumptions due to imperfect information in particular in the case of a qualitative analysis will often imply that some degree of uncertainty remains as to which remedy would produce a net benefit. At any rate, NRAs will have to choose the least burdensome remedy for the operator concerned. The principle of proportionality requires that out of more than one potentially suitable measure only the least burdensome can be adopted (see part I, pt. 4.2).

At this stage the result can also be forbearance if the costs of all regulatory options outweigh the social benefits (s. part 1, pt. 4.2). In addition, regulation is not justified if estimated benefits are joined with various assumptions because of imperfect information about market development, i.e. the realisation of this benefits is extremely uncertain, and the estimation of underlying costs is in relation far less subjective. In this case regulation leads most probably to a loss of productive and/or dynamic efficiency.

A further aspect of evaluating costs and benefits to society is the time horizon of accrual and achievement. If a certain amount of costs will occur at the time of implementation and considering that it will take several years before the cumulative benefits might exceed these costs, a measure is not proportionate.

Hence, in case that the analysed wholesale obligations would be too costly in comparison with the expected benefits to society, normally forbearance should apply. However, where market failure has been identified on a retail market that is generally subject to sector-specific regulation and where an SMP-operator is active, remedies on the retail level may then be taken into consideration if exceptionally wholesale obligations are not sufficient to remedy market failure. This assessment follows the same systematic as for remedies at the wholesale level, i.e. social costs of imposing such remedies should be weighed against expected benefits.

5. Undue burden – relation to CBA

As described in 4.2 of part 1, no measure can be adopted which imposes an unreasonable excessive burden on the operator affected by a regulatory measure. If an obligation is overly intrusive in view of the fundamental (esp. ownership) rights of the

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regulated undertaking, it must not be imposed. It is important to note that this test applies also where a cost-benefit-analysis has come to the result that the envisaged measure will produce overall net benefits and even where no less intrusive measures can be envisaged.

Annex B: remedy assessment procedure – flow chart

Starting point: NRA finds SMP on a relevant market, subject to sector specific regulation

