



Study on
Universal Service in the Accession Countries

Executive Summary

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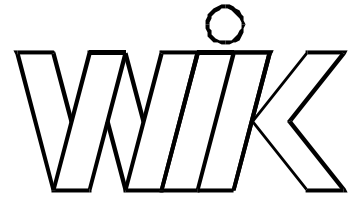


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The views and conclusions presented in this report are those of the authors and do not necessarily reflect those of the European Commission..



I. INTRODUCTION

This study has been contracted by the European Commission in order to better understand the issues surrounding universal service in telecommunications for 13 countries that are in the process of negotiating accession to the European Union. These countries are: Bulgaria, Czech Republic, Cyprus, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovak Republic, Slovenia and Turkey.

The basic requirement for universal service in the European Union is that the telephony service be available to everyone regardless of geographic location, at an affordable price. In order to achieve this, the EU directives set out certain safeguards and mechanisms to protect against prices being set too high and against refusals to install subscriber lines in high cost regions.

For many of the accession countries, however, the problem of universal service is more fundamental. The question is not so much whether the price of a subscriber line is affordable to the individual, but rather whether a policy of telephony to everybody is affordable to the country.

A major conclusion of this study is that universal service policies appropriate for rich countries should not as a rule be introduced in middle and lower-middle income countries. In such countries the authorities should instead:

- concentrate on designing and implementing a liberal regulatory regime that removes regulatory uncertainty for investors;
- enable universal service problems to be addressed initially by cost-effective market based solutions, with modest universal service schemes being added incrementally onto market outcomes.

In this regard, a variety of "self-select" packages offered by operators provide a cost-effective way of addressing the universal service problem. These packages need to be designed to satisfy different user needs, just as the airlines offer business and tourist class alternatives, and the restaurant industry offers options ranging from three star to fast food. Similar policies for universal service are considered to be in the national economic interest because they enable low cost alternatives that effectively support the universal service objective, without necessarily involving subsidisation. They do this by allocating common costs away from those who cannot afford to pay them, and placing them on those with stronger demand.

These basic conclusions were derived by considering what would happen if the safeguards and policies intended to promote universal service in a rich country are implemented in a country that cannot afford them.

Consider the following analogy: When constructing a communications system based on canals and waterways it is important to observe the law of gravity. Water will not flow uphill even if government policy decrees it. If these laws are not carefully observed, some sections of the canal may well never see a drop of water.

Similarly, when constructing a regulatory regime for universal service, the laws of economics and their empirical corollaries should not be ignored. These may not be as precise and well understood as the law of gravity, but if the available knowledge of theory and experience is ignored, it is likely that some



unintentional and unwanted results will occur, and policy makers may also not accomplish their intentions, much as will occur with a canal which defies gravity.

If a country does not yet have the economic capability to justify the availability of telephones in all homes, what is the appropriate universal service objective? This report assumes that the objective should be:

to provide telephone service in a cost-effective manner as quickly as possible to as many consumers as possible, taking into account the national economic situation, where only limited resources may be available to develop all utility and public services, services that need to be developed in tandem.

This objective is entirely consistent with applicant countries' World Trade Organisation commitments and with recommendations by the International Telecommunications Union

In conclusion, universal service policies should be seen as an element of a country's social safety-net, rather than an instrument to accelerate network development. Especially in middle and lower income countries, universal service policies typically displace more cost effective market-based developments. They thus have much in common with traditional state central planning. For most accession countries it would not be appropriate at this time to adopt the universal service policies of a rich country with a fully developed network (e.g. the EU universal service policies) because these policies would be too costly given the many other pressing needs for tax revenues such as for healthcare, education and old age pensions. Less ambitious and less costly universal service policies that supplement market-based developments would be more appropriate.

A significant portion of this study deals with general economic analysis of the various institutional factors and policy options available to support universal service objectives. It then considers the circumstances of each of the accession countries and provides specific recommendations for universal service policies in the light of their accession aspirations.

The study also proposes a policy change in the EU, to prevent applicant countries being disadvantaged by transposing the *acquis communautaire* on universal service.

II. SUMMARY OF THE EU UNIVERSAL SERVICE ARRANGEMENTS

The EU universal service requirements that the accession countries are required to transpose are part of the *acquis communautaire*, specifically the set of directives that have been adopted to define the regulatory arrangement for full telecommunications liberalisation from the beginning of 1998. The EU is in the process of revising these regulations, but the Commission has not proposed any dramatic changes to the universal service provisions.

The main obligation in this arrangement is that access to the telephone network must be provided to all “at an affordable price”, where “affordability” must be seen in the context of the national situation. There are also obligations to provide public payphones to cover reasonable needs, and directory services. In addition, there is provision for specific measures for disabled users and users with special social needs. A Member State may impose these obligations on one or more operators in order to achieve universal service throughout its territory.



Member States may also impose other types of universal service obligations (USOs), but such additional obligations cannot be subject to any funding requirements imposed on other operators.

For USOs that are eligible for funding arrangements there is a concept of “net universal service cost”. This net cost is approximately defined as the difference between the operational results (revenues and costs) that would be achieved with and without the USOs. In those EU Member States that have assessed net USO costs, estimates range from about 0.3% of telecommunications turnover (UK and Italy) to 3% (France). In USA, USO transfers are estimated to be about 5% of telecommunications turnover.

EU law does not include much detail regarding the funding mechanism and indeed, for most Member States, funding has not been implemented because the universal service cost is deemed to be too small to warrant the administrative and other costs entailed in assessing the net costs, and in formally raising the revenues to pay those costs. But Member States may choose to set up a subsidy transfer mechanism whereby the net universal service cost is paid either out of the state budget, by eligible market participants, or by end users through a value added tax system.

III. ECONOMIC AND INSTITUTIONAL ISSUES RELATED TO UNIVERSAL SERVICE

A. Justification of universal service subsidies

There is an increasing understanding that given an appropriate liberal regulatory environment, telecommunications networks and services can be provided beyond what is typically achieved by a monopoly incumbent. There may, nevertheless, be a gap between what can be provided in a liberalised market and political goals regarding telephone penetration. The objective of universal service regulations should be to fill this gap cost-effectively.

Universal service regulations have been justified using two main arguments:

1. There may be a consensus that telephony is sufficiently important that it should be included as an element in the social “safety net” along with access to other public services and other types of welfare offerings.
2. The existence of so-called call externalities and network externalities:
 1. Call externalities, which arise because those receiving calls do not as a rule pay for them despite enjoying some benefit, are generally regarded as not being of sufficient magnitude to warrant formal subsidy schemes.
 2. Network externalities, which arise because the value of the network for each existing customer increases with the number of subscribers. The value of network externalities is considered to be relatively large.

Demand for telephone service has, however, been shown empirically to be very strong relative to income, so that widespread subsidies are not needed to promote its growth. Indeed, widespread and significant subsidies unavoidably result in economic costs due to distorted prices and distorted patterns of investment.



Other problems experienced with virtually all subsidy schemes concern institutional impediments which we address in more detail below. In short the argument that universal service policies should be based on 'internalising externalities', does not transfer from paper to practice.¹

For a country to include telecommunications in its public service “safety net”, it must:

- do so in harmony with other pressing requirements for public funding, such as education, medical care, and old age pensions;
- acknowledge that universal service will compete for revenues from subsidies with other public services (including pensions);
- balance its efforts to promote all public services, and not pursue only one (such as telecommunications) at the expense of the others even if revenues are raised within the telecommunications industry as an USO tax.

In practice there are reasons other than providing a “safety net” for introducing universal service arrangements. Some of these are based on the fact that universal service may be a popular political idea because it can be designed to shift costs from voters to non-voters (i.e. from private individuals to business entities). It can also be used by various interest groups to lobby for costs to be shifted from themselves to another group, for example, from rural to urban users, as occurs with tariff averaging. Such schemes tend to provide relatively few economy-wide benefits compared to the resulting costs, and are perhaps best explained by the visibility of the benefits and the invisibility of the costs. The costs are nevertheless real, with the direct costs financed ultimately by specific groups of subscribers, and especially in the case of generous schemes, the indirect and spill-over costs are borne by the industry and the economy generally.

B. Universal service policies

1. Implementation

Most accession countries have implemented elements of a universal service policy that have been defined for countries in the European Union. These policy choices may have been made because of the commitment by accession countries to transpose the *acquis communautaire*, but they may also be appreciated by politicians and societies that have much of their previous experience in centrally planned economies.

However, the economy and the regulatory environment in most accession countries do not yet provide a sound basis for requiring residential access to be included as part of the social "safety-net", or to reach a percentage of all households similar to that in EU countries. If universal service policies on this scale are nevertheless adopted they are likely to be counterproductive.

¹ Further reasons for this are discussed in Chapter I Sections B and F.



2. Untargeted schemes

Untargeted schemes provide assistance in a way that is not effectively designed to improve residential subscription rates, and/or are not targeted effectively to those who need it. Untargeted schemes tend to involve shifting costs away from residential subscribers as a whole. Examples include:

- universal access subsidies (e.g. subsidised line rental): also referred to as an access deficit (AD);
- free or below cost local calling;
- tariff averaging.

Since the policies are untargeted, they also benefit users who can afford and are willing to pay a price that reflects the costs involved in providing them with service. Especially in the case of the first two bullet points, the policies are very *inefficient* and come at very high costs compared to benefits. Indeed, there is a tendency for them to cause the problems they are reputedly designed to overcome.

Instead of untargeted schemes, we recommend tariff rebalancing, and instead of tariff averaging, partial de-averaging, which can help overcome the reluctance of operators (and sometimes also their financial inability) to build networks and add subscribers in high cost rural areas.

We explain below that such pricing reform should also include the adoption of self-select service packages, which provide a means of shifting common costs away from subscribers least able to pay, thus preserving the universal service objective of making the subscription affordable, while avoiding the need for cross-subsidies which are highly distortionary and inefficient.

3. Targeted schemes

Because targeted subsidies can potentially keep all those subscribers on the network who subscribed under 'universal' access subsidies, and do so at much lower cost, they are a much more cost-effective universal service policy. Moreover, targeted subsidies in principle free up the authorities to allow the operator to charge prices that are remunerative, thus easing the way for liberalisation. In practice, non-remunerative prices stifle network rollout, universal access, and result in a large unsatisfied demand for residential subscriptions, particularly in high cost (non-urban) areas.

A number of schemes target specific groups such as war veterans, people with disabilities, pensioners, public sector workers etc. Such schemes may be politically justified, but the question remains where the funding responsibility should lie. Such schemes are not an especially cost-effective way of improving residential subscription rates and tend to involve relatively high administrative costs, and be prone to fraud. Another weakness of this type of policy is that defined 'privilege categories' who receive discounted services may go well beyond groups considered 'in need'.

Means testing is not generally recommended for similar reasons. Means testing also tends to create a poverty trap, that is, households whose income rises above the means tested maximum will find themselves worse off unless their income jumps substantially above the qualifying point. Targeting pensioners on the other hand is a policy not just intended to improve penetration rates. There is a concern that older people



are more likely to need a phone, and in this regard phones for pensioners may be a very widely supported policy within a society. In such cases we could refer to 'phones for pensioners' as merit goods.

Schemes that are targeted toward non-subscribers in order to get them to subscribe, or are targeted to those who would leave the network if line rental prices were rebalanced upward, are particularly relevant. It is theoretically possible, but perhaps impractical, to identify non-subscribers by using operator and public records. For those who might leave the network, however, the most accurate and only cost-effective way for them to be identified is by them selecting themselves, and this must be done through what is referred to as an *incentive compatible mechanism*, in this case *self-select service packages*.

4. Tariff rebalancing versus access deficit contribution (ADC) schemes

The EU universal service regulations assume that tariffs are rebalanced prior to liberalisation. Below cost line rental and sometimes local call tariffs would rise and above cost long distance tariffs would fall. Without rebalanced tariffs new entrants could 'cream-skin' the high profit services (mainly international and long distance calls) which at present provide large cross-subsidy revenues for the incumbent's residential service.

In this regard, some commentators have argued that an access deficit contribution (ADC) scheme enables tariff imbalances to be maintained, or rebalancing to occur in a gradual manner, while at the same time permitting competition to proceed on the basis of a 'level playing field'. This clearly has political attraction. ADC schemes are meant to impose access deficit contributions on all firms that provide those services which the incumbent presently sells for high profit in order to generate the cross-subsidy revenues for access.

This study recommends that ADC schemes should not be adopted by applicant countries, because of the following serious problems:

- ADC schemes are conceptually complicated and require intensive information to design and operate. As a result the authorities in countries that have adopted them have in practice tended to design and implement flawed schemes that are highly distortional and far from competitively neutral.

An incumbent with an access deficit (AD) is likely to be profitable overall. This is because subscribers buy other services as well as access. An AD does not therefore imply un-profitability, and thus must not be confused with net universal service costs. However, the issues are complex economically, and there has been confusion involving both universal service and AD concepts by the authorities in many countries. There is therefore a danger that unless the assessment of any universal service cost is carefully controlled, access deficit costs may be included in an assessment of net universal service costs. This would go against the *acquis communautaire*, although the unavoidable lack of transparency, in part because of the complexity of the competition issues, may well prevent EU authorities from initiating action against it.

- In developing economies, ADC schemes do not address the problem of the under-supply of access, and actually tend to be a cause of the problems they are reputedly designed to solve.



There is now convincing evidence that maintaining an access deficit in developing economies causes the under-supply of telecommunications infrastructure and service in high cost (rural) regions. Indeed, empirical evidence shows that in many middle income countries, increases in the residential subscription prices lead to increased levels of teledensity.

- ADC schemes, no matter how well designed, will not in practice adequately prevent by-pass of the rules, and will give rise to economic distortion and inefficient entry.

Arguably the main problem with ADC schemes is that they reward those who can avoid (which is legal) or evade (which is illegal) the pricing/payment rules that are the ADC scheme. In dynamic industries like telecommunications, characterised by rapid technological development and convergence, some types of by-pass of ADC regulations cannot be prevented, no matter how expertly the rules are designed. ADCs will encourage the use of technologies that do not have to pay ADCs or pay ADCs only on one part of the service, such as can occur with voice over IP networks.

5. Pricing strategies for accession countries

The most cost-effective universal service policy is to employ carefully designed self-select service packages. Given the prevalence of common costs at virtually all network levels, self-select service packages can be designed which entail significant price differences based on customers' *ability to pay*, and yet do not involve cross-subsidies or excess pricing. In combination with tariff rebalancing, liberalisation and competition, which theoretical insight and empirical evidence suggest also assist universal service provision in middle and lower per capita income countries, much can be done to further universal service without the need for formal subsidy schemes. Our view is that accession countries would do better to consider formal USO subsidy schemes only after such market-based mechanisms have made their contribution.

In addition, partially de-averaged tariffs approximately in accordance with rural and urban supply costs (to reflect the large difference in the cost of providing rural as opposed to urban connections) will minimise line rental price rises for existing subscribers (as the majority are in urban areas). Perhaps more importantly, it will address the cause of the under-supply problem in high cost areas by giving the operator the opportunity to earn a reasonable return on its investments also in higher cost areas. Such a policy can enable the growth of the network into un-served or scarcely served areas. Once networks exist in a high cost area, households that are not able/prepared to pay the prices initially asked can be offered self-select service packages (a combination of lower price and service quality). In particular circumstances, the policy should be accompanied by the express support of schemes that provide *public access* to people in very sparsely populated areas where a phone in individuals' homes would – even with targeted subsidies – be too expensive.

6. Institutional and informational impediments relevant to universal service policies

Rebalancing tariffs is a political issue for which the net benefits are indisputable, although they accumulate in the medium to long-term, while the costs to households, who perceive themselves as being worse off because of it, are immediate. Governments in many countries (both rich and poor) have tended to delay



rebalancing.. In some accession countries there may be a risk that it would be presented to the public as a 'price to pay' for membership of the European Union rather than as a policy that, independently of EU membership, is in the national interest not least because it assists the process of liberalisation. It is important that the logic of liberalisation and tariff rebalancing is subject to an informed public debate in order that policies have public acceptance, as this will imply a much lower risk of later policy reversal by a new government.

In an apparently liberalised environment there is considerable potential for competition and investment to be 'crowded out' by poor regulation and/or inappropriate regulatory institutions. Universal service regulations are a prime candidate for poor policy design and practice, in part due to the complexity of their interaction with competition and other regulations, and because of the political nature of the subject.

The need for *regulatory commitment* is most important. Markets must believe that regulation will be based on well founded public policy objectives, and will not seek short term opportunistic goals which typically strand investors assets. Otherwise investment will only occur where investors have expectations of higher returns commensurate with the increased risk perceived in the regulatory regime. In order for investors to believe that the regulator's approach is not going to fundamentally change at a later date, universal service (and other) regulations need to least:

1. show that the regulator has made relatively sustainable and sensible rulings;
2. provide an institutional structure that protects the regulator from being manipulated by political interests, and also provides legal protection of investors' assets as a back-up in cases where the regulator errs;
3. provide a minimum of discretion to the regulatory authorities, such that the transparency of the regulatory process will be relatively guaranteed.

From a practical and economic perspective, the regulator should therefore be independent of politics.² While complete regulatory independence is neither possible nor desirable in a democracy, requests by government for a change in regulatory policy should ideally be limited in scope to the issues that are *per se* political, and in any case should not address the regulatory detail. Political requests should be limited in scope according to a transparent process that attracts public attention in order for political intervention not to be used for short term political gain at the expense of long term under-investment. By doing this, investors' confidence in long term policy stability is bolstered, with a greater level of competition and investment the likely result.

There are severe institutional and informational impediments to the design and operation of cost-effective formal universal service subsidy schemes. The main weaknesses of universal service policies are their complexity and the inherent scope for mischief. Where countries move to adopt new universal service programs, they can be quickly overwhelmed by a level of regulatory intervention and detail which is beyond their ability (or what has been referred to as their *institutional endowment*) to handle. Countries tend to need time for the authorities to establish credibility with investors and markets, and for the regulator to develop the skills needed to design, implement and operate universal service policies cost-effectively.

² We note, however, that the regulatory authority's independence from politics is not required by EU law.



IV. CONCLUSIONS AND POLICY RECOMMENDATIONS

To gain an understanding of the reasons for ongoing difficulties that accession countries might have in reaching the goal of universal service (and universal access), it has been necessary to study more than merely the policy described as 'universal service' and the prices charged for the services covered by the defined USO scope. It has also been necessary to address a focussed selection of other regulatory factors that are crucial to future investment and the development of competition. This is because the recommended approach to universal service contained in this study is to rely to a great degree on the use of market mechanisms (private investment and competition), and rather less on state planned activities.

The analyses of laws, regulations and decrees in each of the 13 countries covered in this study have revealed a number of proposed or existing rules which may well have a negative effect on the attainment of universal service. These and proposed remedial policy recommendations are discussed below.

A. Tariffs in need of rebalancing

Tariffs are in most cases still far from 'balanced', i.e. there are large cross-subsidies operating in most accession countries. Tariffs need to be largely rebalanced before liberalisation.

The country in which this most clearly appears unnecessary is Hungary, where access charges should be sufficient to fully cover long-run costs. There appears to be ample room for call prices to come down if subject to competition. Slovenia appears also to have close to rebalanced tariffs, although with liberalisation, moderate rebalancing between call prices seems likely.

In order to rebalance in a way that minimises disconnections, operators should be encouraged to use 'self-select' service packages, which will largely avoid the need for cross-subsidies, and minimise any net USO costs.

B. USO subsidy schemes

Unfortunately, a majority of accession countries appear to favour USO schemes that are potentially very costly and, except to the extent that they may be required to join the EU, are unlikely under the present circumstances to achieve the desired universal service goals. Existing EU directives and their draft replacements may have played an important part in the decisions of these countries to adopt what for them could turn out to be a very expensive entry condition.

It is a conclusion of this study that should operators in many accession countries seek to provide service to all those demanding it at anything close to existing prices, net USO costs as a percentage of industry turnover would likely be *many times higher* than they are in the small number of higher income countries that operate formal USO schemes. This would in most cases be true even if the obligation applied only to accession country customers currently with telephone service and not those on waiting lists.

Notwithstanding the institutional difficulties of designing, operating, and costing USOs, industry funded USO taxes of such a magnitude would likely seriously undermine telecommunications industry development and the development of competition. Indeed, USO policies can be the cause of exactly what they are intended to cure, by undermining incentives to invest, undermining the development of competition, and



foreclosing more cost-effective market-based solutions (e.g. self-select service packages). Indeed, the evidence suggests that in middle and lower income countries competition, tariff rebalancing, and perhaps privatisation, have done more to develop universal service than administered solutions. While market-based and administered USO policies need not be mutually exclusive, the balance of the evidence suggests that they can be.

Moreover, the institutional difficulties entailed in designing, operating, and costing USOs, should not be over-looked. In practice, where formal schemes exist, institutional problems usually result in them *not* being designed, implemented or operated in a non-discriminatory and cost-effective way. The reasons for this occurs have been described in detail in this report. These institutional problems are arguably greater on average in middle and lower GDP per capita countries than in high GDP per capita countries, due to historical, political and economic differences.

It is therefore recommended that USO subsidy schemes should only be introduced after pro-universal service market-based developments have made an impact. Such developments which are advocated are the use of innovative self-select service packages, tariff rebalancing, and a moderate level of de-averaging. Among other things, carefully designed service packages will distribute common costs according to *ability to pay*, and will minimise necessary price rises for existing subscribers caused by much needed tariff rebalancing. Where USO subsidy schemes are to operate, regulation should in principle remain technology neutral.

C. Rural network under-development

Several candidate countries have very under-developed rural networks compared to what is provided in urban areas.

These countries should address the lack of rural access by allowing operators to charge partially de-averaged (and rebalanced) prices. Such a move improves the outlook for infrastructure investment in rural areas. The authorities should consider targeted subsidy schemes only after these developments have had a desirable effect.

Closely related to this, countries should avoid regulations that too harshly squeeze the profitability of regulated operators, as this will undermine investment and the development of competition. Among the accession countries, this appears to be a fairly common problem.

D. Income

Subscriber income is the most important factor in universal service attainment. This means that general policies to induce overall economic growth are needed independently of universal service policies in telecommunications. State planned universal service schemes that ignore this fact and attempt to achieve the goals of universal service, however defined, solely through industry-specific policies and regulations are likely to impede movement toward stated universal service goals (and hamper the country's overall economic development as well).



E. Regulatory institutions and universal service problems

1. Lack of regulatory commitment

All countries need to develop regulatory rules and undertake the necessary institutional reforms, sometimes far-reaching, for separation of powers to enable the regulatory authority to *commit* to its rulings.

If the regulator is perceived to have limited commitment to its own decisions, investment and competition will be discouraged, with obvious implications for universal service.

An important problem in all countries is that the regulatory authority is too closely controlled by the political arm of government. This occurs in various ways, but in practice the most common are: through ministers controlling the appointments; through regulations needing ministerial approval; through government controlling directly the regulator's budget; and through dividing regulatory functions among competing bodies in a way that appears to weaken regulation, and may result in agencies with some regulatory powers being played-off against each other.

Given that the institutional structure provides for the independence of the regulator from politics, a preferred way to address the need for the regulator to convince markets of its ability to commit to regulatory decisions is for each country to issue a publicly available strategic plan defining identifiable broad policy goals that need to be completed at certain times. These policy goals could include tariff rebalancing, establishing an independent regulatory authority, and the incorporation and privatisation of the incumbent. Keeping to such a plan would go a long way toward convincing investors and potential new entrants of the country's appreciation of the needs of a market-based approach to telecommunications policy.

2. Licensing and licence fees and fines

There is ample evidence from around the world to show that licensing has frequently been used by licensing authorities to limit entry and competition. To avoid the misuse of licensing, and to send the right signals to potential entrants, the following should be avoided:

- ministers vetting licence applications;
- requiring applicants to provide business plans along with their licence applications;
- applying conditions which are confidential between the authorities and the licensee;
- requiring detailed checks by the authority of new entrants' equipment;
- requiring applicants to 'prove' technical or financial competence; and
- exacting large licence fees for other than the management of scarce resources.

These are practices used variously by many accession countries that will have the effect of excluding or limiting entry. Because of the strong correlation between market liberalisation and the development of universal service, such practices will thus have an important bearing on universal service developments in those countries. Most of the practices mentioned above have no useful 'public interest' purpose in a



modern market economy. They are sure signs that the licensing regime is flawed and that the 'public interest' will not be adequately served.

Several accession countries appear to employ high licence fees as a means of raising revenues for the state. Except to manage the assignment of unavoidably scarce resources, such as where there are a specified number of mobile licences, such fees represent an entry barrier and will restrict competitive entry. They can be seen as a tax to discourage new investment.

A system of specified fines and sanctions has also proved popular among accession countries. The problem with this approach is that it invites firms to breach the regulations where their own assessment of the costs and benefits suggests that this would be to their advantage. Specifying the amounts that will be payable upon breach seems to suggest a greater likelihood that such breaches will occur. It can increase the risk that the relationship between the regulatory authority and operators with significant market power becomes acrimonious. The fact that punishment for any blatant abuses or gamesmanship will be uncertain but sufficient provides the best chance of avoiding damaging confrontations.

F. Proposal for a policy change in the EU

The current EU regulatory framework requires national regulatory authorities to place obligations on designated network operators to ensure that a defined minimum set of services of specified quality are available to all, regardless of their geographical location, at an affordable price. The law allows formal compensation mechanisms to be operated in order to ensure the provision of these services if prices do not compensate the net costs of the operator(s) concerned and if the authorities consider that this constitutes an excessive burden. The proposed new Directive will continue with this approach. It guarantees the services that comprise the scope of universal service, and requires Member States to implement such obligations in line with the public interest whilst requiring the authorities to minimise departures from normal commercial conditions and avoiding distortions to competition. Depending on the meaning of "*...in light of specific national conditions, at an affordable price*", this paragraph may conflict with the "public interest" of many accession countries.

The main point of contention relevant to this study between EU law and policies appropriate for the accession countries concerns the requirement that affordable telephone services be available to everyone at an affordable price, irrespective of the customer's location. If this means that accession countries are required to price telecommunications service so as to achieve a similar percentage of household penetration as occurs in the EU, then the policy would be hugely expensive and given the opportunity cost of the money involved, would be clearly out of line with benefits. It would be beyond their present economic means, given that other (non-telecommunications) public services are competing for the same subsidy revenues. While telecommunications is without question a very important service in developing countries, it is may be no more important than services like healthcare, education, and pensions, services which are provided at lower levels than in high income countries. It is thus not correct to consider any one of these services in isolation from the others. In this regard, countries need to be able to balance their efforts to promote public services. In order to do this they need EU policy to give them the necessary flexibility.

The exact requirements placed on Member States by existing EU law on universal service remain uncertain. For one thing, they are untested in the courts. However, if the effect of the law has been to



encourage many accession countries to adopt universal service obligations that are beyond their present economic means and that may not be achieved in any event, then there may be an argument for adjusting EU law to allow some deferment or derogation to be granted to all but two or three of the accession countries.

G. Summary of country specific policy recommendations

We believe that Cyprus, Malta and probably Slovenia are able to undertake the full *acquis communautaire* for universal service. Tariff rebalancing for these countries is, however, required. Indeed, for Cyprus and Malta very substantial tariff changes are needed.

The other countries are recommended to wait some time before introducing a universal service requirement. Instead they should focus in the near term on implementing a fair and transparent competitive environment together with tariff rebalancing and carefully designed self-select service packages. In addition, those countries that may have a specific problem with network coverage in rural areas, such as Czech Republic, Hungary, Latvia, Lithuania, Poland, Romania and Slovakia should also implement a modest degree of tariff de-averaging in order to improve the return for any operator that might invest in those areas.

To accompany tariff rebalancing we recommend for all countries the use of carefully designed self-select service packages, as these can greatly contribute toward universal service and at the same time avoid large subsidies which tend to impose high costs on the industry and the economy. Any universal service subsidy schemes should be carefully targeted and modest and should not exclude market-based solutions. Countries should try to avoid implementing formal universal service subsidy schemes before market-based solutions have played their part.