



**Contribution of Services of General Interest
to Economic Social and Territorial Cohesion**

Contract No 2003.CE.16.0.AT.038

FINAL OVERALL REPORT

March 2004

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Foreword

This report reflects the nine-month common work of the research team that was set up to answer the call for tender by DG REGIO to carry out a study on the *Contribution of Services of General Interest to Economic and Social Cohesion*. The terms of reference state that this study is not designed to replace the cross-sectional assessment of the quality of these services which is to be launched by the European Commission itself. Nor is the European Commission liable for the content of this document.

Services of general interest play a vital role and belong to the shared values of the Union, as is stated in Article 16 of the Treaty of the European Union. And the Charter of Fundamental Rights, in its Article 36 recognises access to services of general economic interest in its role of promoting social and territorial cohesion. But those services also contribute to the overall economic growth and development of the European Union, while enhancing general social welfare.

Meetings, information visits and discussions took place with respect to this challenge to address cohesion, by looking at the treatment of consumers and citizens in different territories and having various needs and different levels of consumption.

Several issues, in particular of a political nature, remain open. Indeed, liberalisation and regulation do not replace the responsibility of public authorities - at whatever level -, especially when it comes to the arbitration between sometimes divergent public interests, e.g. efficiency, competitiveness of the European industry, infrastructure development, cohesion, solidarity and redistribution between citizens and territories, but also other public interest policies such as mobility, sustainable development or consumer protection. However, those policies do interact and affect each other; and as cohesion cannot be reduced to a single dimension, cohesion policies need to be integrated within the other public policies of the European Union.

The reader will find in this overall final report a cross-sectoral synthesis of the work carried out, but also general conclusions and public policy recommendations, while four sectoral reports are produced separately with more detailed and complete information on the four sectors (transport, energy, postal services and telecommunications) that were addressed in the call for tender.

May this report bring some light to this topical issue which is cohesion - in its economic, social and territorial dimension - in the context of liberalisation of service markets and the service-provision industry, but also within the new framework of an enlarged Europe.

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Liège, December 18, 2003

1. Introduction

1.1 *The European Union and services of general interest*

Since the late 1980s the European Community, and later the European Union, has engaged in processes of liberalisation of services of general economic interest in the telecommunications, transport, energy (electricity and gas) and postal services sectors.

In the perspective of the creation of a single market and the attainment of the four great freedoms of movement of persons, products, services and capital, followed by the implementation of the “Lisbon strategy”, the processes of liberalisation have pursued two main objectives:

- building a single market in each of the sectors, which implies questioning the previous forms of organisation that had been defined in the context of the construction of each of the Member States (on national or infra-national bases according to country and sector),
- inciting better efficiency for the benefit of the users of these services by the introduction of elements of competition in areas that had often been “protected” by exclusive or special rights at local, regional and/or national level.

These liberalisation processes started resonating with the essential transformations of the 1980s and 1990s: technological changes, internationalisation of economies and societies and diversification and territorialisation of needs. Other determinants were low productivity if not actual inefficiency in numerous services, the strategies of certain large industrial and financial groups for services, the development of the influence of neo-liberal theses and the virtues of competition, etc.

However, it soon became apparent that total liberalisation was not possible in these sectors. Total liberalisation risks pulling the carpet from underneath the general interest targets and missions that follow three objectives:

- guaranteeing the right of each inhabitant to access essential goods or services,
- ensuring economic, social and territorial cohesion, promoting the general interest of the region,
- creating the conditions for sustainable economic, social and environmental development.

In these conditions the European rules arising from discussions, player’s initiatives, the play of institutions, have consisted of setting up a controlled, organised, regulated liberalisation. The European Union was led to complete sectoral liberalisation projects by the construction of new concepts and standards. The concept of the “universal service” began to take shape in telecommunications, postal services and electricity, and that of “public service obligations” in energy and transport.

The European Council of Amsterdam in June 1997 adopted the new Article 16 of the Treaty establishing the European Union, which recognises services of general interest as components of “shared values”, stresses their role in “promoting social and territorial cohesion” and urges the Union and its Member States to ensure that they can “fulfil their missions”.

Article 36 of the Charter of basic rights of the European Union proclaimed at the European Council of Nice in December 2000, but not incorporated in the treaties, underlies the

importance of services of general interest for European construction and for the citizens and residents within the Union.

Mention may also be made of two communications (1996 and 2000) and the report (2001) from the European Commission on *Services of general interest*; the judicial precedents of the Court of Justice of the European Communities which, since 1993-1994, recognised that services of general interest could pursue other objectives and missions and assume other organisational forms than provided for in the general rules on competition; the European Council of Nice that approved a declaration developing the main principles in Article 16 of the treaty and called for in-depth study of these questions, carried on by the European Council of Laeken in December 2001 and that of Barcelona during Spring 2002.

In parallel, the Commission embarked upon a process of horizontal evaluation of services of general interest that might help to reinforce social and geographical cohesion “because market outcomes do not or may not provide the socially desirable level of service provision”; it should be stressed that the evaluation methodology contemplated by the Commission is very ambitious, since it aims to be a) “adapted to the evolutionary nature of services of general interest”, b) “comprehensive, taking into account economic, environmental and social dimensions of the market performance of network industries providing services of general interest”, c) “based on the full application of the subsidiarity principle”, d) “transparent and pluralist, given the clear social dimension of these services”¹. Seen thus, the construction of operational indicators, taking account of the availability of data and adapted to the evaluation of services of general interest, is a key preliminary aspect of such evaluation.

The Convention on the future of Europe for its part, after having undertaken an in-depth study in the framework of its working group XI “Social Europe”, put forward a draft Constitution in July 2003 providing for the completion of Article 16 so as to render it a “general application clause” and allow it to form the basis of a secondary law².

Finally, the European Commission published a Green Paper on 21 May 2003 intended to set off a truly European debate on the future of services of general interest. It elicited 263 replies, attesting to the scale of the interests expressed by all the players concerned.

Each of the sectors chosen for this study - electricity, gas, telecommunications, postal services, rail and air transport, local public transport services - come under the heading of “services of general economic interest” as they are currently commonly defined (cf. Extract 17 from the European Commission Green Paper dated 21st May 2003 - COM(2003) 270 final).

On the other hand, they do not all come under the heading of “universal services” (cf. Extracts 50-54 from the European Commission Green Paper dated 21st May 2003 - COM(2003) 270 final): natural gas is not distributed right across the whole European territory but, given that it is a completely replaceable product (other forms of energy, gas in cylinders), only in areas where the delivery costs are not too high. Air and rail modes of transport have not been defined as universal services, due to the fact that their distance from the user can be extremely variable. Nor have local public transport services been defined as a universal service, even

¹ Communication from the Commission, A Methodological Note for the Horizontal Evaluation of Services of General Economic Interest, COM(2002) 331 final, Section 3.1.

² European laws “shall define [the] principles and conditions”, “in particular economic and financial, which enable [the services of general economic interest] to fulfil their missions”.

though they display all the characteristics in each town or city. There is an European Community telecommunications universal service, but it does not cover all means of voice and data transmission. At European Community level, postal services (since 1997) and electricity services (since 2003) do come under the heading of universal services.

Definitions

taken from the Green Paper on Services of General Interest presented by the European Commission on 21 May 2003 - COM(2003) 270 final

16. The term «*services of general interest*» cannot be found in the Treaty itself. It [...] covers both market and non-market services which the public authorities class as being of general interest and subject to specific public service obligations.

17. The term «*services of general economic interest*» is used in Articles 16 and 86(2) of the Treaty. It is not defined in the Treaty or in secondary legislation. However, in Community practice there is broad agreement that the term refers to services of an economic nature which the Member States or the Community subject to specific public service obligations by virtue of a general interest criterion. The concept of services of general economic interest thus covers in particular certain services provided by the big network industries such as transport, postal services, energy and communications. However, the term also extends to any other economic activity subject to public service obligations.

19. The terms «*service of general interest*» and «*service of general economic interest*» must not be confused with the term «*public service*». This term is less precise. It can have different meanings and can therefore lead to confusion. The term sometimes refers to the fact that a service is offered to the general public, it sometimes highlights that a service has been assigned a specific role in the public interest, and it sometimes refers to the ownership or status of the entity providing the service. [...]

20. The term «*public service obligations*» [...] refers to specific requirements that are imposed by public authorities on the provider of the service in order to ensure that certain public interest objectives are met, for instance, in the matter of air, rail and road transport and energy. These obligations can be applied at Community, national or regional level.

[...]

50. The concept of universal service refers to a set of general interest requirements ensuring that certain services are made available at a specified quality to all consumers and users throughout the territory of a Member State, independently of geographical location, and, in the light of specific national conditions, at an affordable price. It has been developed specifically for some of the network industries (e.g. telecommunications, electricity, and postal services). The concept establishes the right for every citizen to access certain services considered as essential and imposes obligations on industries to provide a defined service at specified conditions, including complete territorial coverage. In a liberalised market environment, a universal service obligation guarantees that everybody has access to the service at an affordable price and that the service quality is maintained and, where necessary, improved.

51. Universal service is a dynamic concept. It ensures that general interest requirements can take account of political, social, economic and technological developments and it allows these requirements, where necessary, to be regularly adjusted to the citizens' evolving needs.

52. It is also a flexible concept that is fully compatible with the principle of subsidiarity. Where the basic principles of universal service are defined at Community level, the implementation of these principles can be left to the Member States, thus allowing different traditions and specific national or regional circumstances to be taken into account. Furthermore, the concept of universal service can apply to different market structures and can therefore be used to regulate services in different stages of liberalisation and market opening.

53. During the last two decades, the concept of universal service has developed into a major and indispensable pillar of the Community's policy on services of general economic interest. It has allowed public interest requirements to be addressed in various domains, such as economic efficiency, technological progress, environmental protection, transparency and accountability, consumer rights and specific measures regarding disability, age or education. The concept has also contributed to reducing the levels of disparity in living conditions and opportunities in the Member States.

54. Implementation of the principle of universal service is a complex and demanding task for national regulators which in many cases have only been recently created and whose experience is therefore necessarily still limited. At Community level, rights of access to services are defined in different directives, but the Community institutions alone cannot ensure that these rights are fully granted in practice. There is a risk that these rights as set out in Community legislation remain theoretical, even where they are formally transposed in national legislation.

1.2 The European Union and economic, social and territorial cohesion

Every human group asks questions about its common (or general) interest and the relations of conflict and cohesion at work within. It equips itself with tools to establish and ensure due regard of the rules of life and relations between its component parts. Historically, in Western Europe, the setting of the nation-state gradually emerged as the key component of the definition and attainment of cohesion even if, in the majority of countries, the infra-national elements of cohesion have retained their essential place.

The six signatories to the Treaty of Rome in 1957 mention among the 8 objectives laid down in the Preamble: "*Anxious to strengthen their economies and to ensure their harmonious development by reducing the differences existing between the various regions and the backwardness of the less favoured regions*". However, this objective did not give out on to a common policy for cohesion. The primary objective was to build a Common Market and to roll back the obstacles to trade. The signatories refused to embed regional policy in the treaty for fear of "unwarranted interference" on the part of the Community in the internal affairs of each Member State. The size and shape, hopes and fears of cohesion thus remain a matter for each individual nation-state.

In 1975 however, the first expansion induced the Community to set up the European Regional Development Fund (ERDF) to support regional development projects; that said, regional policy is, now as before, a matter of each individual Member State.

The Single European Act (signed in 1986) gave a blueprint for a prototype "economic and social cohesion". It was as much a case of reinvigorating the then-bogged-down - if not retrograde - process of European integration after the onset of the economic woes of 1973 as it was of watching over expansion that would include Spain and Portugal, with all its attendant new ifs and buts as regards integration.

Eager to implement this policy, the main thrust of which was to even out imbalances between the various regions of the Europe of the 12 and the backwardness of the least-favoured regions, including rural communities, the Community adopted (in 1988) specific rules and procedures of intervention starting with a reform of the Structural Funds: the European Social Fund; the European Regional Development Fund; the European Agricultural Guidance and Guarantee Fund.

The treaty and the policies pursued may well take stock of the state of “economic and social cohesion”; at bottom, however, what the 1992 Maastricht Treaty and the later reform of the structural funds are now putting the finishing touches to ... is regional policy.

The coming to light of “social and territorial cohesion” was not to come until the 1997 Amsterdam Treaty, in the new Article 16 devoted to services of general economic interest: *“Without prejudice to Articles 73, 86 and 87, and given the place occupied by services of general economic interest in the shared values of the Union as well as promoting social and territorial cohesion, the Community and the Member States, each within their respective powers and within the scope of application of this Treaty, shall take care that such services operate on the basis of principles and conditions which enable them to fulfil their missions”*.

The drawing together of these three strands of cohesion - economic, social and territorial - was an issue addressed only in the draft Constitution on the future of Europe, which sets the promotion thereof among the primary objectives of the Union (Article I-3).

Thus it is, to the intents and purposes of the principle of subsidiarity, that cohesion has to do with relations between local-regional, national and European dimensions, without hierarchical inter-relations, but bonds of co-operation and complementarity.

Cohesion spans three inter-related fields:

- economic, the key factor of regional competitiveness and attractivity,
- social, as ingredients of the social cement, relations between individuals and groups, of the possible construction of solidarities,
- territorial, balancing out relations and working towards convergence between regions having differentiated geographical and human characteristics.

The territorial dimension is quite rightly taken increasingly into consideration in analyses of impact, especially in the field of the location of economic activities. There are a number of factors which determine the choice of location (proximity to the market, availability of qualified labour, environment and living environment, etc.), but it is the quality of the infrastructures and public services available which generally take precedence in terms of deciding how attractive a region is.

So the concept of territorial cohesion adds to and strengthens the concept of economic and social cohesion. Its aim is balanced development, based at the same time on reducing territorial disparities and imbalances, on the coherence between the territorial impact of sector-based policies and the Union’s regional policy, on improving territorial integration and on developing cooperation between regions.

Territorial cohesion involves looking at any factors which may lead to an imbalance in the development of the Union, whether they relate to the concentration of activities in certain

areas on a Union-wide scale, both at State and at regional level, territorial or social exclusion phenomena, the location of specific areas due to their geographical characteristics, or outermost regions (article 299.2).

Even if the study of the contributions of services of general interest to the economic, social and territorial cohesion of the Union is largely based on sectoral researches (energy, transport, postal services and telecom), cohesion cannot be apprehended otherwise than in an all-inclusive, trans-sectoral manner. Users, consumers, citizens are not so readily parcelled off into sectors or fields. They feel their integration in the human group, the State, the European Union as an all-inclusive phenomenon.

Cohesion should be treated as a whole and take account of the totality of interactions between services of general interest and cohesion in its various inter-related dimensions (economic, social and territorial). For example, mobility concerns have to be apprehended throughout different public policies, including cohesion ones, but should also be related to competitiveness of territories and regions, environmental considerations, sustainable development, and so forth.

Thus defined, cohesion is not a state of fact, defined once and for all, immutable in time and space but, rather, a movement, a process of becoming, a convergence dynamics, a social and a societal construct. It might even be described as a policy choice in so far as the market mechanisms are not sufficient to guarantee any balanced development.

This is to say that cohesion may equally well advance or retreat, giving way to polarisations, rivalries, confrontations and possible alienations.

It is not surprising that the problem of cohesion should rear its head at European level, nor that it should have brought new developments upon each expansion of the Community, and then the European Union, since it was a matter of integrating countries whose economies were lagging behind in comparison with established members, countries often displaying marked internal disparities. And for all the marked disparities in development, the dynamics of convergence now at work in pro-cohesion policies have genuinely helped the back-markers to catch up with the rest of the field.

This issue of cohesion has of course great topicality as Europe expands to include 10 new Member States between now and 1 May 2004.

The problem of economic, social and territorial cohesion may in fact be considered to arise from the model of European society, which unites the economic, the social and the territorial in positive relations, in a context of balanced, sustainable development, and has made of it a “social market economy”, as the Constitution of the Convention puts it.

1.3 Services of general interest: interplay and cohesion

In the framework of the preparation of the third report on economic and social cohesion in the regions of the European Union of December 2003, the European Commission decided to consider the contributions of services of general interest to economic, social and territorial cohesion in the context of liberalisation of markets and network industries.

This study turns around the services of general economic interest in four major sectors: telecommunications, postal services, energy (electricity and gas), transport (air transport, railways, local public passenger transport).

It concerns nine countries: Finland, France, Germany, Hungary, Italy, Poland, Portugal, Spain and the United Kingdom.

The nine countries studied are at the same time - as some criteria may be cumulative - the six most populous European Union Member States out of the 25, three Member States including the seven outermost regions, two Member States which have joined fairly recently, which display contrasting geographical characteristics, the two States which cover the largest area out of the ten which are currently joining.

Table on basic demographic and economic data for the nine countries examined

	Population million 2001	Area (1000 km ²)	Density persons/km ²	GDP € bn 2002	2002 GDP/head (€ 000)	% Urban population 2000	Persons/household
Finland	5.2	338	15	140	27	67	2.2
France	59.2	544	109	1521	26	76	2.4
Germany	82.3	357	231	2108	26	87	2.2
Italy	57.9	301	192	1258	22	67	2.6
Portugal	10.3	91	112	129	13	64	2.9
Spain	40.3	506	80	694	17	78	3.0
UK	59.9	244	245	1659	28	90	2.3
EU 15	378.7	3236	117	9161	24	80	2.4
Hungary	10.2	93	109	70	7	64	2.1
Poland	38.6	313	123	200	5	62	3.2

Source: European Commission 'European Union energy and transport in figures: 2003'

http://europa.eu.int/comm/dgs/energy_transport/figures/pocketbook/2003_en.htm

Hungary & Poland:

http://www.alsagerschool.co.uk/subjects/sub_content/geography/Gpop/HTMLENH/stats/urb.htm

The table above shows the basic demographic and economic data for the nine countries examined. Of the European Union countries, the Iberian countries have significantly lower GDP per capita than the others, while the figure for the other five countries is close to the EU average. Hungary and Poland have lower levels of GDP per capita, about 20% of the EU average. Germany and the UK have higher population densities and high urban populations, a factor that makes the extension of network services to most consumers much easier. Finland is a sparsely populated country and has a low urban population. Hungary and Poland still have high rural populations.

The present study is designed to consider cohesion issues in the framework of liberalisation, and to come up with policy recommendations in order to contribute to the attainment of the

objectives of the European Union. The main challenge is to define positive relations between liberalisation and the regulation of these services, in order to avoid a situation whereby an uncontrolled liberalisation would lead to tensions and imbalances or even phenomena of economic and social rifts between the territories of the Union. We pointed out in the CIRIEC-CEEP report in November 2000³ that the territorial dimensions of performances of services of general economic interest require analysis with reference to the direct, indirect or induced effects in the territories and that the territorial differentiation of performances of services of general economic interest (geographical disparities of scheduled charges, quality differences, etc.) affects the balance and solidarity of territories.

The analysis of the contribution of services of general interest to economic, social and territorial cohesion also leads to the question of the contribution of pro-cohesion policies to services of general interest, to their missions and organisational forms, in the particular setting of the debates sparked off by the European Commission Green Paper.

This study implies also a centring that work on the relations between unity and diversity.

Unity, for it is the services of general interest in their totality that are part of the “shared values” of the Union, that contribute to “social and territorial cohesion”, that are a core component of the “European social model”.

Five orders of diversity:

- each sector has its own characteristics and follows specific paths of evolution marked by technological, economic, social and territorial changes that are not always synchronous;
- the physical and human geographies are profoundly different and are strong determinants in the forms of organisation and regulation of services of general economic interest;
- each Member State continues to be marked by economic, social, institutional, political, cultural, etc. structurings, sprung from a long history at national level and territorial construction;
- the economic conditions (state of development, employment situation, competitiveness, etc.) do not present the same picture across regions;
- social aspects and issues like distribution of income, differences in accessibility and capability, vary a lot among regions, groups and categories of people and individuals.

The strategies developed by the service operators in the framework of current liberalisations should also be taken into consideration. Indeed, considering the structural changes encountered, they might tend to oligopolisation, to possible better results in terms of productive efficiency, but not necessarily in terms of service quality (or respecting sufficient standards) to all users to an affordable price, and possibly also to “cream-skimming”. Thus, those consequences of liberalisation and others will have to be questioned in terms of their impact on economic, social and territorial cohesion.

³ CEEP-CIRIEC (with the support of the European Commission - DG “Employment and Social Affairs”), Services of General Economic Interest in Europe. Regulation, Financing, Evaluation, Good practices, Brussels, November 2000, pg. 150.

1.4 Contents of this final overall report

This final report intends to present in a synthetic manner the research work carried out during the last nine months (March-December 2003).

This report is divided into five sections:

After this introduction (Section 1), the second section will present the general methodological approach based on a common list of criteria, indicators and legal and regulatory provisions applied to each sector. It will also present the organisation of work and data collection. In Section 3, the main results and conclusions resulting from the analysis for each sector and subsector will be presented in turn. These results are drawn from sectoral reports that are annexed to this final overall report. Section 4 will draw the general conclusions on a cross-sectoral basis but also focus on accessibility issues throughout the sectors. As already pointed out, cohesion cannot be apprehended otherwise than in an all-inclusive, trans-sectoral manner. Furthermore, it is very interesting to stress the similarities and differentiations from one sector to another one when considering various cohesion issues such as affordability, accessibility and so forth. This is what Section 4 intends to do. Finally, in Section 5, we will propose some policy recommendations in order to promote economic, social and territorial cohesion and to enhance the contributions of the services of general economic interest to this cohesion.

2. Methodology, data collection and research organisation

2.1 *The sectoral reports*

As explained in the methodological report accepted by the European Commission in May 2003, the general methodological approach is based on the sectoral reports attached to this overall report.

There are four sectoral reports: Transport (air, rail, local public transport), Energy (electricity and gas), Postal Services and, finally, Telecommunications.

The scope of each sector is defined as follows:

Air transport and Railways: covering domestic and cross-border passenger transport (freight transport falls outside the scope of the report);

Local Public Transport: the study considers several examples (data on regional public transport or long-distance coach transport not collected);

Electricity and gas: covering industrial and residential users;

Postal Services: covers inland mail, cross-border mail, inland parcels, and cross-border parcels and also industrial and residential users (financial postal services fall outside the scope of the report);

Telecommunications: covering different types of access, network and service. A distinction is made between fixed and mobile telephony. Broadband and internet access are also discussed.

Each sectoral report is based on the same study grid (see also Section 2.2) and follows the same structure. It is divided into four parts:

1. General characteristics and trends in the sector
2. Application of the common list of criteria, legal provisions and indicators
3. Data description and analysis
4. Conclusions.

Part 1 introduces the sectoral analysis by with a concise account of trends that are not related to a specific country: technological changes, rules set up at the European Union level (universal service in the postal services, telecom and electricity, public service obligation in transport, ...), and so forth.

Part 2 describes and justifies all the adaptations (the “translations”) of the common list of criteria, provisions and indicators (see Section 2.2) to be applied to each respective sector. The specific indicators applying to each sector are defined. Data collection problems are also explained and the possible solutions are presented, e.g., the use of case studies when comprehensive data collection and analysis are not possible.

Part 3 applies to the nine countries the common list as adapted in Part 2. Data is presented and analysed according to this common grid. The legal and economic frameworks for provision of the specific services in the countries under consideration are briefly described: the way in which the services are operated, the regulatory system, the role of the national, regional and local authorities, the general public policy objectives, etc.

Finally, Part 4 of each sectoral report draws the main conclusions on the contributions of the services of general economic interest to the improvement of economic, social and territorial cohesion.

2.2 The common list of criteria, provisions and indicators

This common list is the core of the common study grid. The organisation of data collection and analysis on a footing of equivalence aims at ensuring coherence in the study approach. This will then allow cross-sectoral conclusions to be drawn and recommendations to be made.

The list of criteria for the assessment is the following:

- I. UNIVERSALITY and GENERAL ACCESSIBILITY
- II. AFFORDABILITY and PRICE EQUALISATION
- III. SOCIAL ACCESSIBILITY
- IV. TERRITORIAL ACCESSIBILITY
- V. CONTINUITY and QUALITY OF PROVISION
- VI. SPATIAL COHESION and DEVELOPMENT

This list is the same as that included in the call for tenders except for the first criterion. This criterion (universality and general accessibility) is necessary to describe overall coverage of the population. Universality of provision is a common feature of some sectors (not all of them). The second criterion is also completed with the aspect of price equalisation to take account of possible provision such as geographical averaging. This criterion (affordability and price equalisation) deals with overall affordability and price trends or provisions. Criterion III (social accessibility) concerns provisions (and indicators) for specific categories of persons (low-income groups, persons with disabilities, etc.). Criterion IV (territorial accessibility) concerns overall coverage of territory as well as problems related to territorial specificities (mountains, islands, rural areas, etc.). Criterion V (continuity and quality of provision) concerns also consumers' perception. Finally, criterion VI is not used in each sectoral report because most data description and analysis related to this criterion are already discussed under previous criteria, especially criterion IV.

Two general lists have been set up for each criterion: a list for the legal and regulatory provisions (A) and another list for the indicators (B). These lists are presented jointly and annexed to this Section.

The first list is a framework list designed to help to identify and analyse the **LEGAL AND REGULATORY PROVISIONS** set to improve economic, social and territorial cohesion. This list has been adapted in each sectoral report in the light of sectoral specificities.

These provisions may be specified formally (legal texts and written regulations and/or procedures, decrees, binding contracts, ...) or informally (customary law and practice, unwritten regulations or general framework, ...).

For each sector, we have tried to identify and describe the **objectives** pursued by the provisions, the ways of defining these objectives, who is in charge of these services, and the

performance evaluation system. We have also tried to bring to the fore and describe recent trends and changes concerning those items (abolition of certain provisions and/or introduction of new provisions, modification of organisational forms, ...). The effectiveness and efficiency of these provisions are discussed in the analysis according to availability of data.

The second list is the list of **INDICATORS**. In principle, these cover quantitative data collected to assess the contribution of Services of General Economic Interest (SGEI) to improving economic, social and territorial cohesion. This data was selected on the basis of⁴:

- relevance
- quantification
- reliability
- availability.

The relevance of the data was assessed according to the contribution to the economic, social and territorial cohesion and on the basis of the criterion that the indicators are supposed to assess.

Various levels of indicators may be distinguished: resource or input indicators, output indicators, result indicators and impact indicators⁵. Most of the indicators are either output indicators related to the services provided or to the network equipment, or result indicators related to the direct and immediate effects brought about by the activities of SGEI. Selected indicators measure both the current situation and recent trends (over a five-year period, data availability permitting).

The impact indicators refer to the consequences of the activities beyond the immediate effects on its direct beneficiaries. The impact of SGEI activities upon the economic, social and territorial cohesion is of course the object of this study, the various indicators being selected on the basis of that impact.

The common list of indicators attached in appendix is only a framework list. It was applied to the four sectors and to the nine countries, taking account of their respective specificities. In some cases, there are empty boxes because the indicator is not relevant to the specific sector or because data is not available. The application of this list to each sector is clearly described in each sectoral report.

Since the list of indicators is one of the cornerstones of our analysis of the contributions of SGEI to economic, social and territorial cohesion, it is useful to consider in turn the relevance of the main indicators listed in the appendix.

Under criterion I (universality and general accessibility), the first goal is to have a measure of the overall availability of the services in terms of coverage of the population. This is a measure of the supply expressed in relative terms with respect to the population. Ideally this should be expressed as the percentage of persons not having (or having) access to the services under consideration. This percentage should be zero (or 1) for those services for which universality of supply is effectively realised. This first indicator should be completed by more

⁴ European Commission, DG REGIO, The New programming Period 2000-2006: Methodological Working Papers, Working Paper 3, Indicators for Monitoring and Evaluation: An Indicative Methodology, p. 29.

⁵ Idem, p. 8.

qualitative data on the main characteristics of those persons not having (or having) access to the services. Such additional information should help to identify the main failures in the overall coverage. Next to the service supply, it is useful to consider the effective rate of use of these services is an interesting measure. The usage rate is the result of the interaction of supply and demand factors: we may for example have in some cases universal supply of a service that people do not use so much anymore. This kind of situation should be pointed out and analysed. The indicator on the rate of use should also be completed by more qualitative data on the main characteristics of those persons not using (or using) the services. This data might help to identify on which categories of persons authorities might want to focus voluntary strategies to increase the usage rate. Finally, under criterion I, the number of service providers for any user is also taken under consideration. This is a rough indicator of the range of choice for any user and of the degree of competition.

Two main types of indicators are considered under criterion II (affordability and price equalisation). The first one deals with affordability indices, i.e. indicators of the cost of some level of consumption relative to the income for some categories of persons. A decrease in this ratio should be interpreted as good news in terms of affordability and cohesion. Good news would also be decreasing price trends. This second type of indicators under criterion II, namely price trends, should also examine the different trends that may be observed in the various parts of the prices. For example, a general decreasing price trend may be accompanied with a decrease in the variable parts of the prices and an increase in the fixed parts. These evolutions would be favourable to large users but not to low users and therefore such evolutions are not so positive in terms of cohesion.

The third criterion (social accessibility) concerns specific categories of persons (low-income persons, persons with disabilities, etc.). In a first step, we try to gather data on the effective rate of use of the services by these specific categories of persons, in order to complete data gathered under criterion I and help to identify cohesion failures. Secondly, data on price differentiations in favour of such specific categories of people as well as data on special equipment availability are presented to complete the analysis in terms of accessibility for specific categories of persons.

The fourth criterion (territorial accessibility) aims firstly at measuring the overall service availability in terms of coverage of the territory. Compared with indicators listed under criterion I dealing with coverage of population, this time we analyse the coverage of the territory. The first indicator is meant to be a measure of the supply expressed in relative terms with respect to the territory. Ideally this should be expressed as the percentage of the territory not having (or having) access to the services considered. Again, this percentage should be zero (or 1) for those services for which universality of supply is effectively realised. This first indicator should also be completed by more qualitative data on the main characteristics of those parts of the territory not having (or having) access to the services. This should help to identify the main defaults in the territorial coverage. Two additional indicators should be provided: spatial density of networks by type of equipment and possible price differentiation with respect to location. These indicators help to qualify the rough measurement of territorial coverage by taking into account possible differences in the degree of accessibility and affordability.

Better cohesion is also obtained through better continuity and quality of provision. Under criterion V (continuity and quality of provision) and according to data availability, five types of indicators are considered, such as reliability of services, safety, connection times, or

complaints systems, etc. The information collected is useful to point out improvements but also progresses still to be made in order to provide good quality services to most if not all European citizens.

Finally, as already explained, according to sectoral specificities and data availability, criterion VI (spatial cohesion and development) is dealt with only for some sectors. For these, a few indicators give some measurement on topics such as the rate of congestion, overall territorial inequalities in terms of development or financing capacities, cross-border trade, connections between different networks, ... These additional indicators will help to complete the overall picture observed in each sector.

2.3 *Research organisation and data collection*

This research, conducted over a period of nine months (March-December 2003) was co-ordinated and supervised by a team of three scientific experts with the help of co-ordination assistants:

- Bernard THIRY, University of Liège & Director of CIRIEC⁶ (Belgium)
- Pierre BAUBY, Réseaux Services publics & CIRIEC-France (France)
- David HALL, University of Greenwich & Director of PSIRU⁷ (UK)

Co-ordination assistants: Barbara SAK, Assistant Director of CIRIEC and
Isabelle CECCHINI, CIRIEC-Belgium (Belgium)

Each sectoral report was placed under the responsibility of particular experts:

<u>Air transport</u>	Giuseppe BOGNETTI, University of Milan (Italy) Gianni PARAMITTHIOTTI, University of Pavia (Italy)
<u>Railways</u>	Henry-Jean GATHON, University of Liège (Belgium) <i>with the assistance of:</i> Stefania ANGHINELLI, University of Pavia (Italy) Ilaria BERETTA, University of Pavia (Italy) Myriam SLUSE, University of Liège (Belgium)
<u>Local Public Transport</u>	Giuseppe BOGNETTI, University of Milan (Italy) Andrea ZATTI, University of Pavia (Italy)
<u>Energy</u>	Steve THOMAS, PSIRU, University of Greenwich (UK)
<u>Postal services</u>	Pierre BAUBY, Réseaux Services publics & CIRIEC-France Sarah VALIN, Réseaux Services Publics (France)
<u>Telecommunications</u>	Ronny DAVID (Pro Bvba, Belgium) Bernard THIRY, University of Liège & Director of CIRIEC (Belgium)

Three other experts from the CIRIEC network participated in this project, especially in the elaboration of conclusions and recommendations:

- Lysiane CARTELIER, University of Paris XIII (France)
- Helmut COX, University of Duisburg (Germany)
- Gabriel OBERMANN, Vienna University of Economics and Business Administration (Austria).

Several other persons, mainly from universities, research centres, etc., were involved in this project for data collection in specific countries. The co-operation that we received from

⁶ International Centre of Research and Information on the Public, Social and Cooperative Economy (www.ulg.ac.be/ciriec).

⁷ Public Services International Research Unit (www.psiru.org).

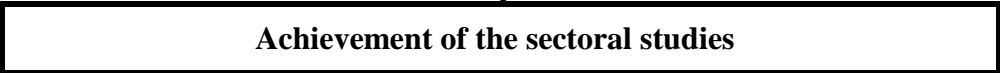
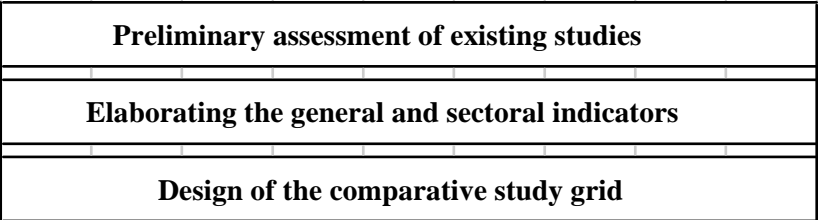
several departments of European Commission DGs, Ministries and regulatory bodies in many Member States, and from certain leading SGEI operators, consumer associations, etc., was particularly valuable.

Data was collected from various sources: European Commission, national Ministries, national regulatory bodies, consumer associations, operators, universities and so forth. Different national contact points served as references for obtaining information from various types of players for each sector (and subsector) and each country. They were most useful in Phase 2 of the project (see below). This wide-ranging data collection was indeed a lengthy and laborious but absolutely essential step in this study.

The project was structured in three phases as shown in the following chart. A methodological report was produced and accepted by the European Commission after completion of Phase 1 (May 2003). Interim reports for each sector and subsector were produced during Phase 2 and accepted by the European Commission in November 2003. These interim reports were accompanied by a progress report overview (November 3, 2003) including two specific appendixes on “*Right to strike and the obligation of continuity in transportation services*” and on “*Limitations on the Right to Strike in Essential Services in EU Countries*”. These appendixes are not reproduced in these final reports.

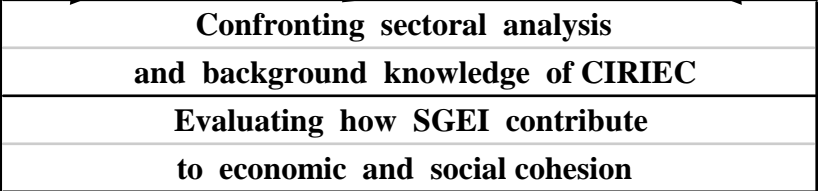
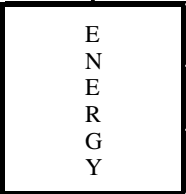
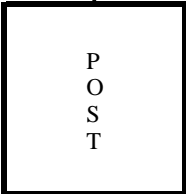
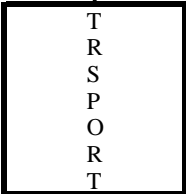
Project structure

Phase 1 (March-May 2003)



Phase 2 (May-November 2003)

	TELECOMMUNICATIONS	TRANSPORT	POSTAL SECTOR	ENERGY
DE				
ES				
FI				
FR				
HU				
IT				
PL				
PT				
UK				



Phase 3 (November-December 2003)



Appendix - Framework list of criteria, provisions and indicators⁸

I. UNIVERSALITY and GENERAL ACCESSIBILITY

A. Legal and regulatory provisions:

- A.1. Universality provision
- A.2. Other public policies designed to increase the overall coverage of the population

B. Indicators:

- B.1. Percentage of persons not having access to the service (current situation and recent trends)
- B.2. Main characteristics of persons not having access to the service (current situation and recent trends)
- B.3. Rate of use of the services (current situation and recent trends)
- B.4. Main characteristics of persons not using the services (current situation and recent trends)
- B.5. Number of service providers for any user (current situation and recent trends)
- B.6. Other

II. AFFORDABILITY and PRICE EQUALISATION

A. Legal and regulatory provisions:

- A.1. General affordability provisions (maximum prices, ...) and price equalisation provisions
- A.2. Other

B. Indicators:

- B.1. Affordability indices
- B.2. Price trends
- B.3. Other

⁸ This list has been adapted to the various sectors taking account of their specificities and data availability (see Part 2 in each sectoral report).

III. SOCIAL ACCESSIBILITY

A. Legal and regulatory provisions:

- A.1. Special provisions for low-income households: prices and minimum service
- A.2. Special provisions for unemployed persons: prices and minimum service
- A.3. Special provisions for elderly persons: prices and special services
- A.4. Special provisions for handicapped or disabled persons: prices, special services and special equipments
- A.5. Special provisions for large families: prices and special services
- A.6. Other

B. Indicators:

- B.1. Percentage of specific categories of persons (elderly persons, handicapped or disabled persons, large families, ...) not having access to the services (current situation and recent trends)
- B.2. Price differentiation with respect to specific categories of persons (current situation and recent trends)
- B.3. Special equipments for handicapped persons and other specific categories of persons (current situation and recent trends)
- B.4. Other

IV. TERRITORIAL ACCESSIBILITY

A. Legal and regulatory provisions:

- A.1. Special provisions for rural areas and sparsely populated regions
- A.2. Special provisions for islands, areas suffering from natural handicaps and other peripheral areas (outermost regions included)
- A.3. Special provisions for urban areas with structural difficulties
- A.4. Special provisions for declining regions
- A.5. Special provisions for border areas
- A.6. Other

B. Indicators:

- B.1. Percentage of the territory not having access to the service (current situation and recent trends)
- B.2. Main characteristics of those parts of the territory not having access to the service (current situation and recent trends)
- B.3. Spatial density of networks by type of equipment (per inhabitant and per square km) (current situation and recent trends)
- B.4. Price differentiation with respect to location (current situation and recent trends)
- B.5. Other

V. CONTINUITY and QUALITY OF PROVISION

A. Legal and regulatory provisions:

- A.1. Quality provisions with an impact on the improving of the economic, social and spatial cohesion

B. Indicators:

- B.1. Reliability of services: interruptions of services, delays, repair time, ...
- B.2. Security of supply, safety
- B.3. Time for connection to the network / to the service
- B.4. System and time to respond to complaints
- B.5. Other, with particular reference to consumer perception of services offered

VI. SPATIAL COHESION and DEVELOPMENT

A. Legal and regulatory provisions:

- A.1. Provisions aiming to correct spatial imbalance and to enhance the attractiveness of regions and areas
- A.2. Provisions aiming to improve the interconnection of networks between regions and Member States, and to solve the bottlenecks' problems
- A.3. Provisions aiming to environmental protection and sustainable development in a territorial cohesion perspective
- A.4. Other

B. Indicators:

- B.1. Spatial imbalances
- B.2. Description of bottleneck situations
- B.3. Other

3. Sectoral conclusions

3.1 *Air transport*

Air transport displays peculiar characteristics that make it a mode of transport especially relevant for medium and long distance travel. For short range mobility cars, buses and railways are much more flexible and less expensive. Therefore air transport becomes a good substitute and eventually a better one only when one has to travel long distance (or shorter ones with geographical barriers), so that the time element gives it a significant advantage over other ways of transport.

The importance of air traffic in each Member State depends on the size and orographic composition of the country (natural obstacles such as mountains or seas are better overcome by air over certain distances). This mode of transport is certainly important for international traffic, but it is for intra-European travel that air traffic is becoming more and more important; the more so if we think of new Member States joining EU. Given the specific characteristics of this mode of transport, general interest will particularly concern situations where other means of transport are less well suited. The European Union geographical area is a good example: air transport can play a very important role in creating a more integrated European area. Greater and faster mobility will increase the possibility of personal contacts, not only for business purposes but also for acquiring more knowledge of other countries and of their cultural heritage. However, to attain a better circulation of people, the decreasing trend in fares must continue (during the last decade, promotional fares decreased by 13%), congestion in air traffic must be limited (this means less flight delays: the percentage of taking-off on intra-EU routes delayed more than 15 minutes should at least decrease to the 1993 level of 15%) and finally access to airports must be made easier (intermodality in EU hubs will facilitate better accessibility from peripheral areas to large EU markets).

In the very early years, air transport was accessible only to the high-income households. Nowadays the situation has deeply changed: over the past half century the passenger transport industry, that is civil aviation, thanks to a significant reduction in costs has developed into a global industry generating high value added. It has also become the principal mode for international and intercontinental mass transport of passengers. It is a growing industry and, directly or indirectly, a source of jobs both in Europe and throughout the world. During the period 1989-2000, passengers transported within EU 15 almost doubled in volume. Expressed in passenger-kilometres (pkm), air traffic has increased by an average of 7.4% per year since 1980. The traffic handled by the airports of the Member States of EU 15 has shown a five-fold increase since 1970. Passenger traffic on intra-EU flights grew from 74 billion pkm in 1980 to 240.8 billion pkm by 1998. If current rates of growth continue, air will soon become the second most important mode of passenger transport after cars. It is a key element in ensuring mobility and thus social, territorial and economic cohesion.

For short distances, other means of transport are a cheaper and therefore compete successfully with air transport. Even for medium distances, air transport is not necessarily the best. It is for these reasons that the concept of “universal service” is not applied to air transport.

Changes in the regulatory framework concerning the European air transport industry have taken place over the past decade: European aviation has moved from a highly regulated market, based on bilateral agreements between countries with little or no competition, to a more competitive market. This deep change took place in different steps starting from 1992, when Regulations No 2407/92 (Single Licence), No 2408/92 (Free Market Access) and No 2409/92 (Tariff Freedom), which constitute the cornerstone of the reform, were approved, followed in 1993 by the regulation on slot allocation (Reg. 95/93). In this new context, the discretionary powers of the national authorities have been curbed and airlines have enjoyed greater freedom to fix fares, open new routes and determine the capacity offered basing their decisions on economic and financial considerations.

The present situation of airline industry is rather unstable; competition is strong, many air carriers are in financial difficulties, mergers are possible. Moreover, low-cost companies are presently growing and represent a new phenomenon.

Liberalisation did not prevent European Governments from retaining the possibility to introduce public service obligations (PSO), to safeguard public interest and the right to mobility on specific routes, which would not be provided by air companies on the basis of pure economic considerations. On the basis of Article 4 of Regulation No 2408/92, par. a and par. d, since 1993, Finland, France, Germany, Greece, Ireland, Italy, Portugal, Spain, Sweden and the UK have identified a number of routes as requiring public service obligations. They connect islands or peripheral and/or less developed regions with the rest of the country. PSO imposition by Member States differs: some applied PSO soon after the Regulation came into force and to a high number of routes, others only recently applied PSO and to a limited number of routes.

The public service obligations regard mainly: minimum frequency, timetable constraints, qualitative standards, maximum tariffs, discounted tariffs for special categories of passengers, continuity of service, reserved slots, special services in case of extraordinary events, etc.

Universality and general accessibility

There is no easy and reasonable way to define universality and general accessibility for air transport sector. It is quite difficult to find reasonable parameters to that purpose. Nevertheless, some indicators can be used as proxies for universality and general accessibility.

Data on traffic development can be considered as an indicator for accessibility. In the past 30-40 years, air traffic has certainly increased its role as a mode of transport especially for long distance and in particular in intra-EU traffic. It has shown the greatest percentage increase (+70% during the period 1991-2000) in passengers-km (pkm) relative to all other means of transport considered. It has also gained positions in relative terms: its share in the overall traffic rose from 1.5% to 5.8%. European citizens travelled on average on intra-EU air transport 1.8 km per day in 1998, equivalent to 643 km per annum, up from 0.2 in 1970. This data shows that the use of aircraft is increasing and becomes more and more frequent in the population at large. It also indicates the presence of more favourable conditions for greater use of this means of transport. Air traffic is also raising in accession countries: in Hungary, the number of passengers carried rose from a little more than

1.5 million in 1990 to 2.5 million in 2000. In Poland, in the period 1994-2002, it more than doubled, from 2 million to almost 5 million.

Another indicator of accessibility is the number of international city pairs connected within the European Economic Area (EEA) and Switzerland which, from 1992 to 2001, increased at an average rate of 5.7% per year. Also the pair routes to EU candidates rose, though at a lower average rate. During the year 2001, Poland also experienced an increase in the number of intra-European routes.

Wider use of airplane is also confirmed by the number of weekly available seats with reference to the top ten domestic and intra-EU routes during the nineties and the first three years of the new millennium.

Moreover, the number of non-stop city-pairs routes within the EU with more than two competitors rose from 23 on January 1992 to 74 on January 1998. Four and a half years later, i.e. by July 2001, this number within EEA and Switzerland was 418, showing a six-fold increase.

In this framework, it must be pointed out that the number of destinations served by low-cost carriers also expanded dramatically: by July 2001, 92 points in Europe were served by at least one low-cost carrier and a total of 133 city pairs, starting from 17 in 1996.

Given these trends we may conclude that consumers' choice is wider.

Affordability

Concerning affordability, data seems to show that, at least for medium and low-income households, travel can be cheaper. In fact promotional tariffs have decreased in nominal terms (13%) and even more in real terms when we take into account that inflation in the period January 1993 to January 2001 was around 19%. Besides, low-cost airlines have significantly increased their share of traffic. Consequently, we might point out that air transport affordability has increased for European consumers.

These trends are confirmed by an analysis conducted by the European Central Bank on a more restricted sample: economy and promotional fares sharply decreased during the period 1997-2000.

Moreover according to Optem, satisfaction attributed by European consumers to air transport prices (5.5 to 6 on average) is the highest among all the services. Thus, if we assume that satisfaction with price level is a signal of affordability, it may be concluded that European consumers judge air transport tariffs as "affordable".

Social accessibility

Concerning social accessibility, Member States have introduced general rules for particular categories of passengers frequently concerning persons with disabilities. They do however not represent a relevant quantitative intervention.

More specific rules are applied to PSO routes. Generally, a maximum fare and a discounted one for different categories of passengers were contemplated. Some Member

States set a young persons fare, a senior fare and a student fare; in only one case, a PEX fare is indicated, so is a family fare, a sport team members fare, a disabled person's fare and a fare for passengers in need of hospital treatment in regional capitals coming from islands and not regional capitals. Some Member States set a resident tariff; one indicates a fare for emigrants residing outside the region. Another one includes a weekend fare.

Territorial accessibility

Better access to airports improves accessibility.

Access to airports by rail must not be considered only as a "per se" linkage, but as a crucial aspect of intermodality for passengers, that is the capacity of combining different modes of transport in a seamless travel experience.

At present, only few European airports have a high-speed rail link, at least 26 have a reasonable rail link, 7 have a link through local rail transportation.

Territorial accessibility is probably favoured by the increased number of airports that are served by regularly scheduled public transportation. This gives residents of an area/region the possibility of a direct access to air transport services.

A very crucial policy action is represented by the imposition of PSO. It has been used in a very uneven way. Out of 85 PSO impositions, 64 are French, Germany has only 6 and the other Member States even fewer.

Number of airports shows a good infrastructure presence in peripheral areas.

Continuity and quality of provision

As a measure of quality we can take punctuality. The Association of European Airlines (AEA) reports on departure delays amongst their members at 28 European airports. In 1993, less than 15% of departures were delayed by more than 15 minutes. Then an upward trend, reaching a peak of 30% in 1999 due to the Kosovo war, was observed. During the two following years an improvement took place.

Continuity and punctuality of service requirements have been introduced to the PSO routes. Generally, minimum frequency requirements expressed in terms of a minimum number of daily round trips are introduced. Almost all Member States indicate the timetables and the type of aircraft to be used. Often, timetables are not precisely indicated, but the request of permitting a minimum time (hours) of stay is reported. Only one Member State indicates the requirement of non-stop flights, while all Member States require a minimum capacity in terms of seats per day to be offered. Continuity and punctuality are required by all Member States but one. Continuity is expressed in terms of a maximum percentage of flights cancelled per year and in the undertaking to serve the route for a minimum number of months (twelve). A minimum of six months notice is required in case of discontinuing the service. Some Member States impose specific requirements concerning ticket sales and service commercialisation. Only one Member State posted environmental requirements concerning aircraft noise.

Spatial cohesion and development

Spatial cohesion and development are influenced by the future problem of congestion. Congestion of European skies will become crucial by 2010. It has a double origin: airport capacity and Air Traffic Management (ATM) capacity.

In 2000, according to the ECAC model, less than one percent of movements presented problems of congestion. According to the forecast of the model, in 2020 air flights constraints, either due to air traffic management or to airport capacity, will reach 36% of the total volume of air traffic.

Improvements in air traffic management will be achieved by the “Single European Sky” initiative, but problems related to airport capacity must be met with investments aimed at improving airports infrastructure.

Recommendations

In synthesis, the contribution of air transport to social, economic and territorial cohesion will in future depend on a series of conditions:

- growing use of the means based on low tariffs. Obviously this depends on the evolution of the structure of the industry (that is the role that competition will play) and on the role that low-cost airlines will play in the future;
- for problems related to peripheral areas or to “difficult to reach” areas, the public service obligation mechanism is probably an adequate solution for the service;
- an airport system with easier and quicker access so that a growing number of people will find the use of air flights convenient; thus Member States should be addressed to improve their airports accessibility;
- efficient Air Traffic Management (ATM) and airport capacity to avoid congestion. While initiatives concerning airports capacity should be addressed by Member States, initiatives concerning ATM should be addressed at EU level, as already done with “Single European Sky”.

3.2 Rail transport

By bringing mobility for greater numbers, the railways contribute to social cohesion. Citizens who do not own private cars, whether for financial reasons, because of their age, a disability, the structure of their family, ... have a recognised right to mobility at regional, interregional and international level. The railways also contribute to territorial cohesion through providing a supply of transport in particular areas not otherwise readily accessible (less developed regions, geographically remote regions, cities with problems of road congestion...). Rail also contributes to sustainable mobility, since the external

costs (air pollution, accidents, congestion, ...) associated with rail transport are relatively lower than those associated with other forms of transport.

The railways seem interesting in the light of current European concerns: a potentially integratable, low-pollution network, guaranteeing social standards and satisfactory work standards, benefiting the development of the territory, relatively rapid and comfortable, accessible to almost everyone, reasonably flexible, contributing to short, medium and long distance mobility, ... They could be one of the driving forces behind European integration. This is why rail policy is assuming growing importance in European transport policy.

Seeking new attractiveness, the European railways have in recent years developed high-speed passenger transport (160 mph or more). They have also found themselves obliged to reorganise. These reforms went ahead, and are in progress, on the initiative of the States - desiring healthy public finances and sustainable mobility or social and economic development - and on the initiative of the European Commission, preoccupied in equal measure by considerations of equity and considerations of efficiency as regards supply of transport in Europe. The evolution of the railways and the missions assigned to them, the opening up of the market, already underway and yet to come, are not without effect for their capacity to contribute to the general interest. This contribution is therefore worth evaluating.

Universality and general accessibility

The principle of universality does not apply as such to transport networks as it applies, for example, to telecommunications or energy networks. It is nonetheless possible to consider certain indicators relating to the provision of rail transport and rate of use of these services. Some of these indicators and the considerations presented here likewise apply to territorial accessibility, social cohesion and development.

The countries analysed all have medium to long term plans for the improvement of their railway infrastructures: modernisation of rural lines, improvement of old lines to make them suitable for higher speeds, construction of new high-speed lines, ... For instance, the total length of the high-speed lines operated in the analysed countries increased by 50% between 1997 and 2003 (from 2221 km to 3319 km). Beside increasing transport capacities, most investments, already up and running or projected, will have the effect of increasing the commercial speed of rail transport, which is positive since a reduction of travelling time brings individual persons, regions and countries closer together.

Examination of recent trends and developments of the share of rail in the passenger transport market⁹ compels recognition of an observed fact. France, Germany and the United Kingdom are the three countries where the market share of rail is increasing: from 7.3% to 8.4% in Germany, 7.8% to 8.3% in France and 4.8% to 5.5% in the UK between 1997 and 2000. They are also countries where the railways have been significantly reformed, countries that have invested in high-speed and/or have been more affected than others by phenomena of road and motorway congestion, particularly in and around their major conurbations.

⁹ And for the countries analysed here.

As an indicator of relative supply of rail transport we take the number of train-kilometres measured against the population of each country. This reveals a marked general increase of supply in the reference countries (with the exception of Portugal), which is no doubt a positive element in terms of accessibility to rail transport. On the other hand, according to locality, the relative availability of trains varies from single (Portugal) to quadruple (Germany), reflecting a clear lack of homogeneity as regards general level of accessibility to rail transport in the various countries of Europe. Supplied train-kilometres per inhabitant were in 2001 3.1 for Portugal, 4.3 for Spain, 5.6 for Italy, 7.3 in the UK, 8.8 in Finland, 9.0 in France, 9.7 in Hungary and 12.0 in Germany.

Regarding the rate of use of railways, estimated on the basis of the number of passenger-kilometres per inhabitant, which is a very broad indicator of the attractiveness of rail, this too is very heterogeneous, ranging from single (Portugal) to treble (France). In 2000, this ratio was 363 km in Portugal, 510 km in Spain, 623 km in Poland, 660 km in the UK, 658 in Finland, 759 km in Italy, 914 km in Germany, 971 km in Hungary and 1149 km in France.

Finally, almost all traditional regional and sub-regional rail services are now organised and managed in accordance with public service agreements.

Affordability and price equalisation

Comparison of fares between countries and examination of their movements over time must, for railways, proceed with all due caution. In fact, the multiplicity of scheduled charges according to categories of persons, time, frequency and place of rail travel, etc., forces us to calculate averages and to use very general indicators. They certainly mask very numerous specificities.

Once again we note very considerable disparities between countries, ranging from 1 (Hungary) to 7 (United Kingdom) if we examine the full price for a 100 km journey, or, alternatively, average revenue per passenger-km. In 2002, the fare of a 100 km journey was 2.90 euro in Hungary, 4.83 in Portugal and Italy, 6.76 in Spain, 12.56 in Finland and France, 13.50 in Germany and 21.27 in the UK. Generally speaking, fares are roughly correlated with GDP per inhabitant, the relatively lower fares being those for Hungary, Italy, Spain and Portugal, the relatively higher fares being those for France, Finland, Germany and the United Kingdom. This therefore does not contradict the idea that the social role of the railways should prompt them to charge lowest fares in least wealthy regions. This is also consistent with the economic principle that suggests that price should be linked to marginal social production cost, this including the cost of congestion.

It will be noted that the high price of rail transport in Great Britain is not altogether surprising. First, because the British railways have traditionally charged rather high fares; regular coach lines often provided a less expensive, less rapid alternative. Second, because the British public authorities - for two decades now - have sought to reduce the amount of public subsidies paid out to public transport.

The price trend (revenue per passenger-km) over the past five years shows, at constant prices and for all the countries analysed, a relative stabilisation, with of course some variations according to country, certain countries such as Italy and Germany even experienced a reduction of average per passenger-km. This relative stagnation may be

explained by a desire to attract greater numbers of clients to rail and, sometimes, by better control of production cost developments through various reforms and reorganisations. Finally, there is no visible convergence in time between fares charges by the different European operators.

Social accessibility

In mentalities, as in the legislations, the right to transport is increasingly coming to be recognised. For economic reasons (low-incomes, ...) or for physical reasons (persons with reduced mobility, the elderly, ...), or for both reasons together, many categories have no choice for travel other than public transport in general, and rail transport in particular.

In economic terms, we see that special pricing measures have been taken in favour of specific categories of persons. All railway companies studied offer preferential rates for senior citizens, young persons and large families. Most companies also charge reduced fares for persons with reduced mobility. However, the fare reductions granted to workers, persons with low-incomes, unemployed persons, ... are anything but generalised. This implies that part of the economically disadvantaged population must pay the full price to use the railways and *ipso facto* find themselves excluded not only from rail travel, but also, for want of an alternative, from any other means of medium and long distance travel.

Table 3.2: Special provisions by categories of passengers

<i>Country</i>	<i>Low-income households</i>	<i>Elderly people</i>	<i>Handicapped persons</i>	<i>Large families</i>	<i>Workers</i>	<i>Students and young people</i>	<i>Others (Trips, Groups,...)</i>
DE	No	Yes	Yes	Yes	No	Yes	Yes
ES	No	Yes	Yes	Yes	No	Yes	Yes
FI	No	Yes	Yes	Yes	No	Yes	No
FR	Yes	Yes	Yes	Yes	Yes	Yes	Yes
HU	Yes	Yes	Yes	Yes	Yes	Yes	Yes
IT	No	Yes	Yes	Yes	Yes	Yes	Yes
PL	Yes	Yes	No	Yes	No	Yes	Yes
PT	No	Yes	No	Yes	Yes	Yes	Yes
UK	No	Yes	Yes	Yes	No	Yes	Yes

Source: internet sites: National Railways, National Ministries of transport; UK Strategic Rail Authority (SRA) (2003).

Regarding accessibility to rail transport for persons unable to use a car for physical reasons, this seems to be an area in which much has been done, but much remains to be done. The rail companies have often inherited old stations, ageing infrastructures and

unsuitable rolling stock, and also enormous debts that limit their range of action. Now, in rail transport, the service life of rolling stock is often particularly long (e.g., 30 to 50 years for coaches). The end result is that the rail companies are unable to wait until modernisation of their fleets or construction of new stations to organise accessibility for persons with reduced mobility to rail transport. They must therefore progressively transform access to stations, platforms and rolling stock. Since general statistics on access to stations and trains are not available, we cannot confirm these progressive adaptations, often at very different tempos in different countries, mainly due to financial considerations. European support to promote the adaptation of infrastructure and rolling stock to the needs of persons with reduced mobility would be desirable to accelerate this trend.

Finally, it must be pointed out that the complexity and lack of transparency of prices and the lack of clear information on services offered may be an obstacle to the use of railways by disadvantaged persons. European regulations to ensure the transparency of prices would also be desirable.

Territorial accessibility

Through providing transport in particular areas not otherwise readily accessible (less developed regions, geographically remote regions, cities with problems of road congestion, ...) and providing international and long distance transport, the railway contributes towards territorial cohesion. However, it must be remembered that its intrinsic characteristics do not allow it to be present in each point of the territory. Railways, in fact, require an especially heavy, expensive infrastructure and are, for example, not suited to for travel in rugged, uneven terrain. The result, in terms of efficient use of resources, is that it may be preferable to rely on bus transport rather than rail transport in certain regions.

We have already seen that all the countries analysed have medium to long term plans to improve their railway infrastructures: modernisation of rural lines, improvement of old lines to make them suitable for higher speeds, construction of new high-speed lines. These investments have the effect of reducing travelling times, thereby bringing individual persons, regions and countries closer together. However, this should not blind us to the fact that, over the past 30 years, the length of railway lines operated in the European Union has decreased, mainly because of the closure of secondary lines serving sparsely populated regions: the length of the EU 15 rail network was 173 414 km in 1970, 168 039 km in 1980, 162 182 km in 1990 and 156 353 km in 2000. Furthermore, the introduction of high/middle speed rail travel has often brought the major conurbations closer together within a given country and within the Union. However, the process has also involved the axing of traditional rail links, this to the detriment of smaller urban centres whose accessibility has now decreased at national and international levels. Such, for example, is the case for the small towns and cities near the French-Belgian and German-Belgian frontiers; with the coming of Thalys Paris-Brussels-Cologne, they saw their accessibility reduced by the axing of traditional international rail routes, this despite the opening of a number of euroregional links. By the same token, and regardless of travelling time, lack of fare integration risks making a journey between two neighbour-state European cities more expensive than that between two cities which - though more distant - happen to be located in one given country. European regulations to ensure an equal treatment of internal and cross-border journeys would be welcome. Finally, it

might also be noted that, unlike most “normal” trains, high-speed trains are often not accessible without a reservation.

Continuity and quality of provision

It is generally accepted that demand for rail travel is still more broadly influenced by quality considerations than by price considerations. The quality of railways is a rather broad concept involving comfort, travel time, frequency, punctuality, regularity, cleanliness, safety, security, information, absence of power failure, ... and passengers' rights (service guarantees) vis-à-vis the railway company. The increase of the market share of the railway, whether compared with the aeroplane or the motorcar, will necessarily require improvement of the quality of rail services. It will also necessarily require a better understanding of - and better provision by the rail carriers for - the needs of their clientele.

Although rail transport is relatively safe (in 2000, the fatalities per billion passenger-km in EU 15 were 0.3 in the rail sector, against 9.2 in the road sector), and although modernisation of rolling stock and the construction or conversion of stations and the introduction of high-speed trains have improved the image of rail transport, much remains to be done in terms of quality. Exactly the same may be said for punctuality, commercial speed and passengers' rights, particularly in connection with suburban lines and regional trains. Passengers of these two types of trains too often feel that they are not the top priority of railway companies. In total - except in Finland and, by a narrow margin, in Spain - the rail-users' satisfaction rate never exceeds 60%, which is manifestly improvable. In 2001, this satisfaction rate was 46.1% in Germany, 46.7% in Italy, 56.5% in Portugal, 57.6 % in the UK, 58.7 % in France, 61.3% in Spain and 71.1% in Finland.¹⁰

Spatial cohesion and development

The first point to make is that the problem of spatial cohesion and development for rail passenger transport is bound up with that of general accessibility and territorial accessibility. The railways contribute to development and social cohesion at regional, inter-regional and international level because they represent a low-pollution means of mass transport, less expensive than the private car and relatively interconnected, and providing relatively fast travel, not only over short and medium distances, but also over longer distances.

The role of the railways in this field may, however, be influenced by the phenomenon of regionalisation of the regional-interest transport that has been introduced, to varying degrees, in several countries of Europe such as Germany, France and Italy. In fact, the regionalisation of railways, by drawing together the organising authorities - local or regional - and users, should allow a better appraisal of, and thus provision for, a better satisfaction of their needs. The other side of the coin, however, is that serious thought must then be given to capacities for the financing of rail transport by these regional and local authorities. Indeed, in the future, regionalisation of the railway might have the unhappy effect of reducing provision of rail services in less wealthy regions lacking sufficient budget resources to guarantee their financing. More affluent regions, on the other hand, could afford to improve the quality and quantity of rail services throughout

¹⁰ Source: European Commission, Eurostat (2001).

their territory. This would further accentuate the disparity of social and economic development between rich regions and poor regions; it would therefore reduce the attractiveness of depressed areas and would hinder attainment of the objectives of spatial cohesion.

Furthermore, whatever the organising authority, the systematic award by public tender of transport service contracts, especially regional, is bound to reveal the costs involved in each such contract. This is a very good thing indeed in terms of the principle of truth of costs and prices. However, an explicit disclosure of the costs of each rail service may prove to be an added incentive for the organising authorities to favour lines with heavy and medium traffic and to close the less-used lines serving depressed areas. This would also hinder attainment of the objectives of development and spatial cohesion.

Recommendations

The reorganisation already under way and yet to come in the railway sector are now gradually reshaping the role of the public authorities in the field. States and rail operators have long been intimately connected. However, the public authorities are becoming increasingly inclined to distance themselves from railway management in the strict sense to pursue two key missions: one, to arbitrate and, two, to formulate and then finance public service and general-interest missions. This evolution in the role of the public authority must be supported. It is therefore necessary to hammer out certain recommendations in connection with rail policy.

The transport policy of the various public authorities, at whatever level, should take account not only of the private and financial costs of the different means of transport, but also of the external costs and the costs of congestion. It should result in improved supply of rail services, not the opposite.

The hoped-for expansion of railway services, insofar as it can be supported through public funding, must be accompanied by a better management and reinforcement of the productive efficiency of the networks. This should be supervised by the national governments. If this expanded supply is to be useful, it must also meet users' needs; it must therefore go hand in hand with increased quality of the service provided. The opening up of the market is often regarded as being a factor that enhances performance. It may, however, also bring less welcome effects. The public authorities, as regulators, must guarantee not only maximisation of the gains, but also minimisation of the negative effects of this opening. Beside the safety of transport, they must pay quite particular attention to passengers' rights, whether the services be of regional, inter-regional or international interest.

A railway accessible to all necessitates the maintenance and further development of pro-solidarity mechanisms between poor regions and rich regions at Member-State level and at Union level alike. This solidarity (in the form of subsidies, low-interest loans, ...) must, of course - as in the past - concern railway infrastructures, but it must also concern the management of railway services, or rolling stock, since these concern disadvantaged persons or less favoured areas. This solidarity should be organised at national as well as European level according the principle of subsidiarity.

The heterogeneity of fares charged and services offered (in terms of both quantity and quality) is obvious. Although a certain number of measures have already been taken, and although uniformisation at the European level is not foreseeable, nor even necessarily desirable, a set of minimum rules should be laid down at the European level, and then implemented by the Member States. These rules, which must show due regards for criteria of equity and efficiency, will have to consider at least the following points:

- accessibility to stations, to platforms and to trains for persons with reduced mobility and persons with equivalent status without waiting for modernisation of the rolling stock;
- accessibility to rail services for persons with low purchasing power;
- the quality of service provided;
- passengers' rights;
- cross-frontier railway services, including "proximity" transport;
- simplification of fares with a view to greatest possible transparency and better understanding by all;
- integration of timetables throughout Europe.

3.3 *Local public transport*

The European Union acknowledges local public transport services, and other services of general economic interest, as being important tools guaranteeing the effectiveness of recognised fundamental rights and as being part of the developing European social model. They can, in fact, make a great contribution to both social and territorial cohesion, preventing and fighting exclusion of weaker categories (the so-called "transport disadvantaged": those too young or too old to drive, low-income groups, persons with disabilities, ill persons, large families, immigrants and visitors) and avoiding or reducing discrimination in accessibility for specific deprived zones (outskirts, peripheral and rural areas). Moreover, they create conditions - at local level - for sustainable development of economic, environmental and social activities, avoiding a situation whereby the major role played by private cars as a means of transport creates a dynamic trend that cannot be sustained in the long run. According to this complex and evolving public mission, it is important to evaluate the performance of the units providing these services, focusing on the more recent developments in their organisational forms and on the corresponding evolution of the basic contents - universality, affordability, accessibility, quality, security - which can ensure that the objectives of territorial and social cohesion and those of sustainable development are attained.

Universality and general accessibility

Consumer surveys at European level show a more or less satisfactory level of accessibility to local public transport (LPT) and, in particular, a relatively small level (6% in 2002) of non-accessibility. However, during the period 2000-2002, there was an increase of the percentage of dissatisfaction (non-accessibility + difficult accessibility); if the trend continues, there may be cause for alarm. However, users' perception of general accessibility/non-accessibility, especially for urban transport, is strongly differentiated

according to various specific characteristics of the persons approached: age, level of income and (mainly) location.

Contrasting signals emerge from data on supply and demand. On the one hand, widespread increase in supply may be observed, especially in the latter half of the 90's, with the goal of giving LPT a growing role in relieving urban congestion and pollution. A negative trend is noticeable only in the UK deregulated system and in Central and Eastern European cities (Warsaw, Budapest, Dresden), where an excessive financial burden has been imposed on local authorities and has seriously compromised efforts to maintain and enhance urban public transport systems¹¹. However, these negative trends seem to be slowing down and, at the end of the decade, important recovery signals (Metro + light rail in the UK, Warsaw network, Budapest metro extension) show the renewed interest of State authorities in supporting LPT. The major financial efforts are directed to mass transit services (urban rail, light rail, tram and metro), which may prove to be the most competitive alternative to the private car. The construction of new routes or the upgrading of existing routes now characterise many European cities in large metropolitan areas (e.g., Milan, London, Lisbon, Budapest) and in small and medium-sized cities (e.g., Florence, Clermont-Ferrand, Nottingham), with the aim of increasing the commercial speed of services. The expansion of metro and light rail systems may also play an important role in terms of social and territorial cohesion since new routes (say, in Madrid, Milan) are usually designed to link residential and peripheral areas not otherwise served by the public transport system, where low-income households are predominantly located.

On the other hand, recent demand trends appear to give mixed signals, with important positive results, especially in the latter half of the 90's, but also with some urban areas showing a negative trend (Milan, Lisbon) in passengers transported despite expanding supply. A recovery in modal split by LPT is still the exception (e.g., Nantes or Madrid). Passenger data shows that services provided on protected lanes are competitive and perform much better than traditional buses (Milan, Lisbon, Nantes, London, Budapest).

The partially contradictory data on supply and demand of LPT seems to be consistent with the user-perception survey, giving good responses as regards accessibility, but much lower levels of satisfaction as regards quality. The major challenge to be faced is not the general availability of services, but their ability to meet users' needs and to be a valid alternative to private passenger motor vehicles.

Affordability and price equalisation

The organisational and financial development of 90's in LPT has been characterised by an increasing tendency to select providers through competitive tendering (France, Finland, Italy from 2004, Germany and UK for social services) and by a stronger financial pressure put on local authorities and, consequently, on providers to increase cost-recovery ratios. In line with these trends, prices in LPT services increased quite rapidly in the last decade, usually with a higher trend than the general consumer price indexes. This has been particularly evident in the UK and in transition economies where public support for public services has suddenly fallen off. Only in some cases (e.g.,

¹¹ This lesson could be important for other States in which a similar process of decentralisation will soon be introduced (say, Italy and Portugal).

Helsinki), have important gains in productivity been obtained so that financial sustainability and price stability could be achieved simultaneously.

Of course this recent trend could not be completely consistent with the social role attributed to LPT: it can produce a considerable and increasing monetary burden on users, especially on disadvantaged categories (low-income, large families, students, the elderly), restricting their mobility options in some cases. Seen thus, the use of alternative financial instruments to sustain LPT may be an important tool to reduce users' direct contribution, without creating imbalances in local finance. Examples in this direction can be found in the case studies considered: the earmarked tax used in France, the earmarking of parking and road-pricing revenues (as recently introduced in Nottingham and London) and the Federal tax deductions for public transport costs introduced in Germany in 2001.

The comparative analysis of affordability indexes (intended as a ratio between monthly pass and regional GDP index) gives a very scattered image, without any clear inverse relation between them and local GDP index: on the contrary, in some cases, a higher incidence of public transport fares in less affluent cities (Byalistok, Dresden, Seville) seems to emerge. This may somehow contradict the idea that the social role of LPT should be greater in poorer areas, where car ownership is lower and LPT-dependence higher, and confirm the importance of the availability of some form of financial support to local authorities by higher levels of government, at least for the provision of minimum level of services.

Social accessibility

LPT may play an important role in reducing restrictions on the use of the basic need of transportation, especially for certain categories whose numbers are growing and for which these restrictions may be particularly acute, such as persons with reduced mobility, elderly persons, disabled or ill people, etc., ...

Regarding economic accessibility, even if some categories (senior citizens, young people, students, persons with disabilities) are commonly addressed by special fares and travelling conditions, there are other important groups (employees, unemployed, members of large families, low-income) for whom facilities are less available and for whom the total burden of transport costs may bring about marginalisation¹². On the whole, since the extent of potential recipients of rebates is very large and, in some cases, difficult to be adequately determined and controlled (low-income), it emerges clearly that general affordability of services should be pursued rather than a difficult and costly identification of wide numbers of categories of qualified demand. Interesting developments, particularly in Germany and Italy, with innovative services such as car

¹² For example a recent English study (Office of the Deputy Prime Minister - Social exclusion Unity, *Making the connections: Final Report on Transport and Social Exclusion*, February 2003) shows some evidences on the subject:

- one in four people say their job search is inhibited by the cost of travel to interviews;
- half of 16-18 year-old students say they find the transport costs hard to meet;
- 6% amongst 16-24 year-old have rejected training or further education because of transport problems;
- 23% of people who use mental health services say that financial problems have restricted their ability to access these services; the majority of these responses related to transport problems;
- 18% of people without car say that they have difficulty seeing their friends and family, compared with 8% of those with access to car.

sharing, can make occasional use of a vehicle possible and affordable, even for low-income or large families, while providing an incentive to minimise driving and rely on alternative travel options as far as possible.

In terms of physical accessibility, the increasing quota of the population with problems of access to LPT services¹³ has led to a nearly single case of positive legislative intervention at EU level in LPT, defining, through the so-called Bus and Coaches Directive (2001/85), a basic “European right” of access to means of transport for all persons with reduced mobility travelling in the European territory. Even if the implementation of the directive is still in progress, many national initiatives (e.g., in France and the UK) seem to have anticipated the European norm: the widespread increase in the rate of public fleet modernisation has in many cases given important results in terms of physical barriers, information and personal safety. New buses, trams and stations are in fact generally low-floor and often equipped with ramps, guidelines for blind people and acoustical announcements. Important initiatives have also been taken to guarantee better surveillance on LPT vehicles and facilities, especially in large cities and in subway networks, in order to make services more attractive, especially for those weak categories for which the use of private cars is already reduced or impossible (elderly, children, persons with disabilities), and to keep services alive on less busy routes, where crime and aggression is more common. Measures taken are still very uneven and the percentage of vehicles and stations equipped with new devices may be very differentiated (from 4% in Budapest to 100% in Munich, as regarding low floor buses). The availability of funds seems to be a key element influencing the renewal of vehicles and full alignment with the Bus and Coaches directive, with a quicker rate in countries such as France, Germany and the UK and major problems in other countries, such as Portugal, Italy or Hungary. The development of national (or European) programmes for fleet and infrastructure upgrading (as provided in many national experiences) appears to be a key element in avoiding delays and imbalances of local action¹⁴.

Territorial accessibility

Considering the pivotal role of cities and especially central urban areas for many economic and social activities (jobs, recreational facilities, public services, ...), territorial accessibility is important in guaranteeing that interconnections with peripheral and outlying areas remain possible under reasonable conditions (especially in terms of time and costs) and do not create any form of discrimination for their inhabitants. The widespread process of relocation of residential and commercial settlements towards the outskirts over the last decades has made problems of territorial accessibility more acute, generating increasing dependence on cars and increasing the social role of adequate LPT services for people living in the outskirts, often penalised by reduced access to private vehicles and by the introduction of new forms of protection to inner city areas (traffic limitations, bans except for local residents, parking prices, road-pricing, ...).

¹³ It is esteemed for example that around 20% of population have problems in accessing public transport. Source: European Commission, DG Transport and Energy, Working Group Accessibility, *Benchmarking the special Needs of Different Users Group in Public Transport*, Citizens Network Benchmarking Initiative, 2002.

¹⁴ As in Poland where the National Fund of Rehabilitation of Disabled Persons (PFRON) was set up to co-finance (up to 50%) the modernisation of the fleet and the providing of the existing rolling stock with indispensable devices for persons with disabilities.

Some recent signals show that a better awareness of the problem has been slowly gaining ground. First, after a long trend of out-of-town facilities and inadequate access by public transport, walking and cycling, efforts to better integrate land-use planning with transportation policy have been pursued in many places, e.g., Helsinki, Munich, Lisbon and Warsaw.

Moreover a clear trend toward intermunicipal management of services is present in Europe: most large urban areas considered (Helsinki, Nantes, Lisbon, Munich), but also some medium-sized centres (Clermont-Ferrand, Florence, Nottingham), have in fact developed forms of integrated transport planning, fundamental prerequisites to guarantee an increase in the attractiveness of services and an adequate level of accessibility over the whole urban area. The attempts by different territorial authorities to put together technological, organisational and financial resources have certainly promoted the diffusion of many forms of integration (tariff, physical, information) which may appreciably reduce discontinuity and loss of time for passengers changing between one or more means of transport. Tariff integration, for example, is becoming a widespread reality in the European context, albeit to different degrees: there are cases (e.g., in Germany or Finland) where the number of operators involved and territory covered are extremely wide, giving users a strong impression of unity of the LPT chain in the whole regional area; in other cases experiences are less advanced, although a positive trend is discernible. It is interesting to note the implementation of the electronic smartcard as a means of payment (Oulu, Clermont-Ferrand, Florence, Milan), facilitating all forms of interchange with other urban services and functions and increasing affordability. Efforts towards multi-modal and multi-area ticketing should be pursued and intensified in future, especially through public funding, since the means and the number of operators are generally rising in urban transportation, making even more necessary an adequate connection of the different parts of the mobility system. A more differentiated picture emerges as regards park-and-ride places offered at the edge of the urban areas to facilitate intermodal change and the access to city centres without using private cars: whereas in some cases (Nottingham, Munich, Milan), car drivers coming from almost all outer routes now have accessible low-cost parking places in the outskirts of the cities, with efficient interchanges with mass transit services, there are still several cases in which they are not provided in sufficient number (generally in small or medium-sized cities, in poorer areas, or in large urban areas without LPT on rail). An additional action in this direction is required and should be pursued jointly with the provision of new mass transit lines, since the ability of new infrastructures to intercept an increasing quota of inbound traffic strictly depends on the availability of rapid LPT services.

Within urban area boundaries, public transport density (in terms of network and stops) is very differentiated, with an extensive coverage of territory of more than 2 km of bus lines per km² in many cities, but also with cases with 1 km or less than 1 km. Density does not seem to be influenced by city dimensions, since a high level of coverage can be found both in large urban areas (London, Helsinki, Munich, Budapest) and in smaller centres (Florence, Beja, Nottingham, Bialystok). Even if the level of coverage appears satisfactory and without evidence of a recent negative trend (although positive trends have been shown in many cases: UK, London, Hungary, Warsaw, Beja and Lisbon), it cannot be considered as an exhaustive indicator of the concrete ability of services to ensure adequate accessibility even in remote and peripheral areas. No information is given on the kind of service provided (more especially in terms of network on reserved lanes), nor on frequency or spatial distribution of routes, which are fundamental elements

ensuring effective reliable coverage of the entire urban territory. Some evidence has been found on this point, even in cities with high density indicators such as Florence, showing that services tend to cluster mainly around the busier routes and offer high-reliability services for only a small proportion of infra-urban routes.

The challenge of combining a high level of territorial coverage, even for peripheral and less densely populated areas (and/or in off-peak periods), together with financial sustainability in the management of services, is currently being tackled by several local authorities with the introduction of flexible route services (collective request taxi and bus). Even if initial experiments with these forms of transport showed that the services were expensive and failed to be effective for dispersed trip patterns, some recent positive cases (especially Florence and Beja) have demonstrated the possibility of making them available without excessive financial burden and the wish of local authorities to extend them to an increasing number of routes.

Continuity and quality of provision

Quality and attractiveness of LPT may be considered as a key factor for meeting not only the market demand of mobility, but also previously identified social needs.

Regardless of the nature (public or private) of service providers, the use of contracts is rapidly growing in the European context to bind them to predefined quality standards and to avoid ambiguous *ex post* determination. In recent years, this has favoured major improvements regarding quality and has increased the (low) levels of user satisfaction on LPT. Advanced information systems, for example, are rapidly developing, providing an important contribution not only in terms of overall quality of services, but also in terms of territorial and social accessibility (making connections and interchanges easier and offering major opportunities to mobility-disadvantaged groups such as senior citizens or deaf or blind persons). Similar considerations may be made regarding safety and comfort: the current fleet modernisation is contributing to improving the existing standards and providing vehicles with more advanced solutions (seats, air-conditioning, video surveillance). There is also a significant trend towards fostering transparency to customers in order to obtain immediate and useful feedback as regards level of satisfaction: easily accessible and direct complaint processing services are, for example, developed in many cases.

Major problems remain regarding the commercial speed of surface services, since a wide typology of cities - both large and small centres, wealthy and less favoured - suffer from low and often declining speeds: a direct consequence of traffic congestion and land-use by private means. The main challenge is to attribute a new and higher degree of protection to public transport vehicles (in Nottingham, among case studies, more than 10% of surface services are on reserved lanes), in order to give them a speed advantage compared to private motorised transport, particularly on main routes during peak periods. The general picture emerging from case studies is one of a positive attitude in these directions, with many new services on reserved lanes under development, even in smaller centres; closer attention is now being given to the protection and monitoring of existing routes, even if financial and political barriers may seriously delay the upgrading of the network.

Spatial cohesion and development

Although local transport is less significant than other services of general economic interest when spatial cohesion is considered on a wide scale, some important implications due to territorial imbalances may be observed: structural deficiencies in the provision of services in particular areas, in fact, may be seen as a threat to a balanced and sustainable development of the Union and to an equal access to basic right in the whole European territory.

Inequalities in income, for example, may prevent poorer cities from attaining the same level of services than wealthier ones. Even if case studies do not give a definitive evidence in terms of service availability, since LPT network density appears only loosely correlated with income level, many problematic issues remain regarding less developed centres: affordability, frequency, development of high-speed lanes (as with the second and third metro lines in Warsaw, where construction is stopped because of lack of funds), rate of fleet modernisation, accompanying measures (park-and-ride spaces, development of information technology, electronic ticketing).

A second element of imbalance seems to be related with city dimensions: the attention given to transport issues in agglomerations and the possibility of better exploiting collective means in more densely populated cities have commonly concentrated resources in large metropolitan areas, making service supply and quality more developed and acceptable. This may constitute an important element of disparity and insufficiency, since problems of territorial and social accessibility and of urban congestion will increasingly concern minor centres.

Recommendations

The particular nature of LPT services, as against other services of general economic interest provided by large network industries, makes it difficult to imagine a normative intervention at the European level of government (and *ergo* by national ones), defining detailed minimum services requirements for the whole territory (lines served, frequencies offered, fares) or providing common regulatory rules in all Member States, since the principle of subsidiarity and the extreme differentiations of needs and requirements are consistent with an organisational and managerial system characterised by a strong local commitment and responsibility. This appears to be confirmed by the latest analysis, which shows that the main responsibilities have recently been strongly decentralised, while common and fixed rules are present only in very specific areas, where solidarity and non-discriminatory issues are particularly strong¹⁵.

At the same time, since local transport services (as other services of general economic interest) are acknowledged by the European Union and by Member States as important tools in the field of social and territorial cohesion and are considered as basic instruments for pursuing sustainable development in urban conurbations, it appears important - from a Community point of view - not only to ensure continuous evaluation and benchmarking of the ability of the LPT to meet these objectives, but also to put in place concrete

¹⁵ As in the European Bus and Coaches Directive or in the Finnish legislation where municipalities are obliged to provide transport for elderly and persons unable to use the normal public transport services.

initiatives to help local authorities to develop adequate provisions of services. In this direction, new projects and investments, particularly those directed towards more general interests (social accessibility, territorial cohesion, urban regeneration, environmental protection), should be supported, through conditional grants, by higher levels of government, in order to close the gap and prevent disparities and deficiencies throughout national as well as European territories. Important actions in this direction have been found in case studies: many national specific programmes (The National Environmental Fund Earmarked Subsidy in Hungary, the National Fund for the Rehabilitation of Disabled Persons in Poland, the Rural and Urban Bus Challenge in the UK) have provided resources for major social issues (upgrading of the existing public transport fleet, preservation of suburban and rural routes, tariff coverage for specific categories), helping local authorities to improve their services and network; there is also renewed interest in - and fresh funding for - the construction of high-speed services in smaller and medium-sized cities (Nottingham, Clermont-Ferrand and Florence), where they have been traditionally less developed.

The overall picture, however, remains differentiated, with disparities and shortages still evident, and certainly requires stronger (more targeted) public support in this direction. This may at first involve not only public funding at national and sub-national level but also complementary funding at the European Union level¹⁶. From this point of view, it appears important, defining the main principles of the next programming period, to give a higher consideration to the urban dimension of policies, since cities and urban areas are “key actors in realising economic, social and territorial cohesion”¹⁷ and since disparities within cities are often bigger than disparities among different cities and regions. The structural instruments should therefore recognise the strong local-scale dimension of cohesion as well as of sustainability items and the role of large cities as pivotal forces for regional development. In this direction, local transport network development and management, and more generally accessibility problems, should play a fundamental role, since quality of life standards in large European cities and effective linkages with their hinterlands are - and will be - dependent on how increasing mobility needs (both passengers and goods) are - and will be - satisfied.

In a general framework of limited resources, with national and sub-national budget constraints, many of the requested interventions to improve LPT services could be sacrificed, by Member States and by local authorities (above all in less developed regions), to the detriment of social, territorial and economic cohesion. An intervention by the Union could be very important in different directions:

- to research and disseminate best (and even bad) practices in urban transport systems¹⁸, both regarding infrastructure development and service innovations;

¹⁶ This is explicitly provided by the “Green paper on services of general economic interest” which states at Point 62 of the annex that the financial support to SGEI for their public service mission can consist in direct compensation through a Member States budget which “*can be complemented by Community funding based on the principle of co-financing, e.g. through structural funds*”.

¹⁷ Eurocities, *The Future of Cohesion policy in Europe*, Brussels, June 2003.

¹⁸ As specified in the White Paper: “*The Union cannot use regulation as a means imposing alternative solutions to the cars in towns and cities. That is why Commission is confining itself to promoting good practices*”.

- to support innovative actions in the field of local public transport provision¹⁹. Many of the devices and new initiatives which can play an important role as regarding social and territorial cohesion, as telematics guidance, video surveillance, multi-modal and multi-area ticketing, real-time information systems, innovative services (e.g., car sharing or on-demand routes), are in fact far from a mature level of development throughout the European territory and can strongly benefit from a further financial impulse, above all in the starting phase;
- to support urban regeneration actions (house and industrial setting, planning, building renewal), aimed at stabilising the local population and to prevent further outward migrations of residential and productive settlements;
- to allocate more financial resources to local public transport infrastructures (metro lines, light rail, reserved bus lanes, park-and-ride facilities), which can strongly influence commercial speed and attractiveness of collective means and play an important role in facilitating connections with peripheral areas as well as with regional, national and international networks (say, airports). Case studies have shown how many problematic issues remain in this direction, above all in small or medium-sized cities or in poorer areas (as in the second and third metro lines in Warsaw, where construction is stopped because of lack of funds), but even in some large cities where peripheral zones and outskirts are often not adequately connected. This can justify a higher focus within the European perspective to the development of new infrastructures, to foster land coverage and to prevent inequalities and imbalances among and within European cities;
- to support actions which can have a particular role as regards social accessibility, particularly with anti-discriminatory purposes for all European Citizens: low-floor vehicles and stations, tactile surfaces, audible announcements, information for foreigners. In this field, the availability of funds has emerged as a key element influencing the renewal of vehicles and full alignment with the Bus and Coaches directive, with a quicker rate in countries such as France, Germany and the UK and major problems in other countries, such as Portugal, Italy or Hungary. The development of European programme for fleet and infrastructure (as already provided in many national experiences) appears to be a key element in avoiding delays and imbalances of local action and to prevent disparities regarding well recognised common rights. Promoting the take-up of eco-efficient technologies which exists, but are underused, “due to lock in to existing technologies or difficult access to finance”, is one of the objective recently expressed by the Commission²⁰ and could represent a signal in the right direction.

¹⁹ The Civitatis initiative, for example, has co-financed in 2001 pilot projects in 14 Union’s cities and in five of the candidate Member States.

²⁰ Commission of the European Communities, *Building our Common Future – Policy Challenges and Budgetary Means of the Enlarged Union 2007-2013*. COM (2004) 101 final.

3.4 Energy (*electricity and gas*)

Specific features of the gas and electricity sectors

International comparisons of gas and electricity indicators must be done with great care, especially in comparison with other services. There are four main reasons for this:

- Unlike most other services, gas and electricity demands are derived demands. Consumers do not want a kWh of electricity or a GJ of gas, they want the service, e.g., heat, light, power for appliances etc., that the energy can provide. This means that the consumption of gas and electricity does not necessarily reflect how well consumers' needs are being met. For example, if a consumer lives in a large poorly insulated home, his energy consumption for space heating could be high even though he might actually be receiving quite a low level of comfort. Similarly, the efficiency of refrigerators and other appliances varies widely between comparably sized models.
- The demand for energy is heavily dependent on climate. Northern European countries will have a much greater demand for space heating and light than Mediterranean countries. Equally, for countries with district heating schemes or where multiple occupancy dwellings are prevalent, the space heating load is likely to be less than in countries with individual dwellings.
- There are other sources of energy, such as fuel oil and district heating that are not taken account of in these statistics. These are often direct substitutes, particularly for natural gas, of comparable quality and if these are not taken into account, comparisons will be misleading.
- And, the price of the service is not fully under the control of the supplier and is a poor measure of the company's efficiency. For electricity, about a half of the consumer price of power is the cost of generation. For fossil-fuel plants, this cost is dominated by the cost of purchasing fossil fuels, the price of which is set on world markets. For gas, the largest element of the consumer price is the cost of purchasing gas. The gas price is increasingly a regional one, with a European wholesale market emerging but the wholesale gas price is still generally index-linked to the price of oil and is thus inevitably rather volatile.

The first three factors mean that differences in per capita energy consumption may not be a good indicator of the level of energy service actually being received. The fourth factor means that movements in gas and electricity prices are not reliable indicators of changes in sector efficiency.

There are many difficulties in making meaningful international comparisons of prices. Movements in currency exchange rates and general inflation will lead to changes in relative prices that do not reflect any change in relative efficiency. The adoption of the euro in 2002 in six of the nine countries examined will reduce this problem for future comparisons. Particularly for electricity, national resource endowments and technology choices will also lead to variations in electricity prices. For countries dependent on fossil fuels purchased on the international market, such as Italy, prices will fluctuate according to the level of fossil fuel prices. For countries that generate power mainly using their own coal reserves, e.g., Poland, prices should be more under national control. For countries that use non-fossil fuel sources, such as hydroelectricity (e.g., Norway) or nuclear power (e.g., France), prices may fluctuate according to climatic conditions (hydroelectricity) or for nuclear power according to whether technical problems are encountered. Countries

with balanced portfolios of generation, e.g., Finland, Germany and the UK may have more stable, but not necessarily lower prices. For gas, countries may be restricted in their choice of supplier by geographical factors, for example, the Iberian countries are dependent on North African suppliers, while East European countries are likely to be supplied predominantly by the CIS countries.

If European markets develop in both electricity and gas to replace the national markets that now determine prices, all other things being equal, some of this variability may be reduced. However, for electricity, liberalisation and competition are likely to influence technology choice, favouring low capital cost options. Evidence so far suggests that this is likely to lead to a dramatic increase in gas-fired generation and much less interest in nuclear options (because of their high construction cost). At worst, gains in geographical diversity of supply may be counterbalanced by loss of technological diversity.

Conclusions on the indicators

Universality and general accessibility

The electricity networks are essentially complete at a consumer level and electricity already meets the coverage aspect of the universal service designation. For gas, which is unlikely to be designated a universal service, networks are expanding rapidly particularly in the Mediterranean countries. Finland is a special case for gas supply because of the existence of district heating systems and the low population density, which limit the extent that gas can penetrate. For both electricity and gas, the level of gas and electricity consumption seems to be strongly climatically dependent, and consumption per household is much lower for the Mediterranean countries. In Finland and France, large amounts of electricity are used for space heating accounting for the high demand per capita.

Consumption of electricity in Hungary and particularly Poland is much lower than in the other countries and would be expected to rise if disposable incomes increase to the levels. Consumption of gas is rising rapidly in Poland and Hungary, but consumption per connected household in Hungary is still below that of countries in Western Europe with a milder climate.

Affordability and price equalisation

The situation with number of suppliers and price equalisation measures is in rapid transition as energy markets open up to competition. In the past, in some countries (e.g., Germany and Finland) a large number of suppliers have existed. Whether this large number of companies led to inefficiencies because economies of scale were not exploited is not clear. The level of prices in countries with different numbers of distributors provides no evidence to support the existence of significant scale economies. However, as competition is introduced, the number of suppliers is likely to fall sharply due to mergers and as large companies expand their market share by taking over smaller companies. In other countries, (e.g., Italy, France and Portugal), just one company controlled the market but in Italy, ENEL is now in the process of being split up, and its market share is being forcibly reduced.

If competitive markets in gas and electricity are successfully created, there is likely to be a transitional period where a number of new companies enter followed by a 'shake-out'

when a handful of strong companies will increasingly dominate. This has already happened in Britain, where the number of significant companies for gas and electricity had fallen by summer 2003 to only six.

The EU's statistics on affordability are a starting point to examining the issue of affordability of energy supplies, but they do not take account well of consumer needs. As argued above, consumers in South European countries are likely to have much lower energy needs than those in the North. Total household energy consumption in Northern European countries is double that of those in the Iberian Peninsula. The statistics on affordability are based on an assumption that poor consumers require much less energy than richer consumers. For example, the electricity statistics assume that poor consumers of electricity use about a third of the amount the average consumer does while for gas, it is a tenth. This assumption is hard to justify. If the poor household is a large family living in a large, poorly insulated house with an inefficient heating system, the amount of energy needed for the inhabitants to be adequately warm could be very large. Such a family would often find it difficult to take the measures to reduce their needs, especially if they live in rented accommodation. The EU indicators on fuel poverty are out of date (1996) and do not seem reliable. The published EU figures for the Mediterranean countries seem implausibly high, for example, the data suggests 66% of Portuguese households cannot afford to keep their home adequately warm, while the corresponding figure for the UK (6%) was well below the official national estimate (20%) for the same year.

The statistics on pricing also cause problems of interpretation because, as argued above, the efficiency of the companies is far from being the most important factor in the price. World fossil fuel markets are more important, as is demonstrated by the rise in gas prices in 2000 and 2001. The data for Hungary are difficult to interpret because of exchange rate, inflation and purchasing power issues that make comparisons with Western Europe difficult.

The opening of markets makes it more important that strong measures are in place to protect consumers, but it also makes it harder to design such measures. In a regulated monopoly market, electricity and gas companies have no incentive not to apply fair, non-discriminatory tariffs. The regulatory process will guarantee their costs are recovered, for example, for supplying poor consumers at advantageous rates. In a free market, tariffs will reflect the 'value' the company puts on that consumer, and gas and electricity companies will not offer concessionary rates unless they are paid by government to do so. Consumers that are most profitable have the highest value. Small poor consumers, who have difficulty paying their bills and who do not have the resources to buy the other services many electricity and gas companies now offer (for example, telecoms and financial services) are not attractive and are likely to be charged the highest prices. Subsidies may be difficult to administer and it may be easier to deal with the issue of 'fuel poverty' through the social security network, or by targeted energy efficiency programmes than through tariff interventions.

This aspect of the impact of competition on poor consumers seems to be already apparent in the UK, where consumers that use pre-payment meters, generally the poorest consumers, are being charged at least 10% more for their energy than the richest consumers, those that pay by Direct Debit. Another risk to small consumers of competition is that large consumers will use their resources, expertise and buying power to get lower prices for their power and gas, but at the expense of small consumers. The

evidence on electricity is so far indecisive. UK data and UK official reports do suggest that small consumers have done badly from retail competition. The ratio of the price paid by small consumers compared to large consumers has increase from 2.35 in 1992 to 2.69 in 1999, while the UK National Audit Office found that retail suppliers had failed to pass on wholesale price reductions to small consumers. For Finland, the relative price of electricity for household and industrial consumers has not changed significantly in recent years. However, in Germany, since competition was introduced in 1998, the position of small consumers seems to have worsened significantly.

Pre-payment meters raise other issues. Consumers using them value the control over budgeting they give them, but they do immediately identify to potential gas and electricity suppliers the consumers that are least likely to be profitable. They also can hide the extent of 'fuel poverty'. Instead of the company having to disconnect consumers that do not pay (an easy number to keep track of), the consumers disconnect themselves and it is impossible to determine accurately how many consumers are self-disconnecting.

Social accessibility

The area of continuity and quality of provision is of special importance in the transition to liberalised energy markets. Under the system of monopoly integrated companies, there was no incentive for companies not to maintain their systems in good repair – they could recover whatever costs were incurred from their consumers. Because of their monopoly status, customer service might not always have been good because the consumers did not have the sanction of taking their business elsewhere. For the purposes of analysis, it is necessary to divide the issue into quality for monopoly provided services and quality of services purchased from a competitive market.

The transition to liberalised markets has sometimes been accompanied by the adoption of incentive regulation for monopoly elements of the system. Under this, any savings the company makes compared to their expected costs can be kept as extra profits. This may lead to a tendency to make short-term cost savings at the expense of long-term reliability, where companies are privately-owned or are being run on more commercial criteria. This will be a particular problem where ownership is unstable. For example, the electricity network for the eastern region of England has had five different owners in only seven years. If there is a lag between inadequate maintenance and reduced reliability, this could create dangerous incentives. This makes the introduction of a full range of well-designed performance indicators a priority and most countries in the EU are now setting up such a system.

Territorial accessibility

Electricity already meets the coverage requirements of its designation as a 'universal service'. There is no evidence yet that consumers in remote regions and islands are receiving poorer service and higher prices than those in population centres as a result of liberalisation. Regulators will need to remain vigilant to ensure that competing suppliers do not discriminate between consumers, targeting consumers that are cheapest to supply. Gas is unlikely to become a universal service because there are often ready substitutes of comparable quality, such as district heating and fuel oil. In those countries where the network may not yet have been extended to all consumers it would be economic to cover,

for example, Poland and Spain, national policies may be necessary to ensure the network is expanded as fully as is desirable and economic.

Continuity and quality of provision

At present, the system is still settling down: not all countries are collecting data and there may be problems that data are not yet fully comparable. Nevertheless, there does seem to be clear evidence that the reliability of the service is much lower in the Mediterranean countries compared to the North European countries. This observation seems to be reflected in the consumer satisfaction ratings. Rural areas consistently receive a poorer quality service than urban consumers. Within countries, there seems to be considerable variation between the best and the worst regions, although until there are several years of data, this observation cannot be confirmed.

Overall, there are concerns about the use of quality indicators as an instrument to ensure monopoly companies provide a good service. First, if there is a significant lag between neglect and poor performance, the indicators may not be quick enough to identify the problem before lasting damage is done to the network. Second, because indicators are not comprehensive measures of system quality, it may be that companies will be able to improve their performance as measured by indicators, whilst not improving actual system reliability. The British decision to introduce a more comprehensive performance measuring programme (under its 'information and incentives' programme) suggests this risk is real. Third, there may be distributional problems, for example, rural consumers may suffer if companies find that the most cost-effective way to improve their indicator performance is to invest in the urban network.

For the retail business, the situation is different. Once competition is introduced, consumers will be able to change away from suppliers that give bad service. However, changing supplier can be a tedious and time-consuming process and there may still be a case for performance standards for retail suppliers. This would increase consumer confidence that switching supplier would not lead to unacceptable service standards.

For the gas industry, few quality indicators exist, and if the satisfaction survey reflects the quality of service consumers are receiving, there is a need to improve the quality of service in this sector.

Spatial cohesion and development

The opening up of the gas and electricity markets has led to an increase in the volume and importance of international trade. In many countries, trade connections for gas and electricity are already very fully used. The statistics and capacity utilisation may also be misleading. If the lines are heavily contracted for a long period ahead, there may be little room for the sort of short-term trade that could have a beneficial impact on prices.

There is also a paradox that strengthened trade links are more important, but more difficult to finance. In a monopoly market, companies operating either side of a border can decide that a link would be mutually beneficial and can finance it by passing the costs on to consumers. This is how Britain's only electricity link to mainland Europe was financed. In a competitive market, no generator or retail supplier can guarantee to have a market share long enough to justify the expenditure on a link. The requirement that a

significant part of the capacity of the link is kept available for short-term trade makes the income of the link and hence its ‘financeability’ even more difficult. It remains to be seen whether electricity links from Britain to Norway or the Netherlands and from the Netherlands to Norway can be financed on the commercial market with no regulatory cost recovery guarantees. The alternative of financing interconnectors as part of the national regulated infrastructure would need to be carefully considered to ensure consumers are not left bearing the cost of uneconomic facilities.

Recommendations

The opening of gas and electricity markets to competition is both an opportunity and a risk for household consumers. It offers the possibility for consumers to exert pressure on suppliers to provide a good, cheap service by allowing them to switch away from companies that are too expensive or provide poor service. However, the evolution toward a more profit-maximising ethic if not accompanied by public service regulations brings with it risks. Companies will tend to provide the best service to the most profitable consumers leaving poor or expensive to supply consumers with a poor service. They may also be tempted to cut costs in the interest of short-term profitability but at the expense of long-term system reliability.

New data on service quality needs to be collected to protect consumers against this risk. The data on affordability and fuel poverty need to be much more fully developed to take account of the actual needs of the consumer. A full range of system reliability indicators needs to be collected and continually monitored. These indicators should be regularly reviewed to ensure that they are still measuring overall system quality accurately.

The issue of international trade is a complex one. International trade is not a worthwhile end in itself. It is valuable if it provides discipline on prices and if it improves system reliability. However, international links may be expensive or environmentally unacceptable and it is therefore necessary when considering new links to assess whether the link is the most cost-effective way of improving system reliability and imposing cost discipline. If a new link would bring net benefits but would not be provided by the market, the use of EU structural funds may be justified.

3.5 *Postal services*

Context and specificity of the postal sector

Since the first Green Paper of 1992, the postal services sector has been considered as very important for European cohesion, economic and social as much as territorial.

The postal service has the specificity of embracing an essential dimension of proximity, a network that is at least as “human” and relational as technical, and a network that is both integrated - with local, national, European and worldwide dimensions - and highly ramified. The postal service, more than any other sector, has to contend with

geographical, physical and human diversity. These two elements will sometimes converge, creating very different situations for the provision of the universal service and for its financing.

Before European integration, all the countries of Europe had produced a similar “model” of integrated national public monopoly, charged with general-interest objectives, missions or obligations.

The postal sector has some specificities in European regulation: the 1997 Directive begins by defining the objective of the “universal service” and laying down quantitative objectives with regard to intra-Community standards for quality of service. This first Directive states the possibility for each Member State to put in place a reserved sector to finance the universal service under the condition that the price is less than five times the public tariff for an item of correspondence in the first weight step of the fastest standard category, provided that the weight is less than 350 grams.

At the same time, traditional postal activities are facing increasing competition from alternative means of communication. Gradual opening up to competition obliges each historic national operator to seek stronger internal competitiveness, to extend its portfolio of activities and, at the same time, to examine the possibilities of external growth on markets in some other Member States.

In all the cases studied, the pursuit of competitiveness urges operators to lay the emphasis on rationalisation of the networks on which the postal service is based: reorganisation of the post office network, which often leads to a thinning-out of their density in sparsely populated and/or isolated areas and regions; modernisation of mail-handling and parcel post infrastructures (automation of sorting centres); reorganisation of distribution networks.

Some operators feel that their public-service or universal-service obligations are comparative advantages, allowing them permanent access to all user-consumers, while others consider they represent obstacles for the development of their enterprises.

The new 2002 Directive confirms the 1997 orientations on a progressive opening of the market to competition: the threshold for reserved services was reduced to 100 grams or three times the tariff for the basic weight from 1st January 2003. Outgoing cross-border mail also has to be liberalised, but there are possible exceptions to the extent necessary to ensure the provision of universal service. On 1st January 2006, those quantitative limits will again be reduced to 50 grams or two and a half times the tariff for the basic weight.

With regard to a possible third step of liberalisation, which could lead to suppress the reserved sector, the European Commission is firstly invited to provide “*a prospective study which will assess, for each Member State, the impact on universal service of the full accomplishment of the postal internal market in 2009*”. The Commission will submit by 31 December 2006 a report to the European Parliament and the Council “*accompanied by a proposal confirming, if appropriate, the date of 2009 for the full accomplishment of the postal internal market or determining any other step in the light of the study's conclusions*”.

Universality and general accessibility

Concerning universality and general accessibility, Article 2 of the 1997 EC Directive states: “*Member States shall ensure that users enjoy the right to a universal service involving the permanent provision of a postal service of specified quality at all points in their territory at affordable prices for all users*”; this has since been incorporated in the national legal and regulatory provisions of the countries under review.

The obligation for the operator is to provide a minimum of one collection and one distribution per day to personal residences, at least 5 days a week. Universal service includes collection, classifying, transportation and distribution of postal sending up to 2 kg and postal parcels up to 10 kg, as well as registered and value declared mail. This concerns both national services as well as cross-border ones. It implies equality of treatment, respect and no discrimination of users as well as continuity of service.

The quality of service is mentioned: more than the obligation for each Member State to publish rules concerning the quality of universal postal service within the national territory, standards for quality for intra-Community cross-border mail are fixed at Community level by the Parliament and the Council. Some quantitative objectives are fixed in the annex of the directive: at least 85% of sending has to be delivered within D+3 and 97% within 5 days.

The requirement of universal service has effectively been implemented in the studied countries, including Hungary and Poland, although some exceptions can persist regarding particular conditions. Some Member States have maintained better frequency of collections and/or deliveries per week than stated in the universal service obligations.

Affordability and price equalisation

Ensuring access to a universal postal service “*at affordable prices for all users*” is left to the discretion of each Member State. Price-setting falls within the responsibility of the operator in charge of the universal service and, in some cases, on the regulatory authorities (maximum prices). In other segments, the regulatory authorities mainly oversee price trends.

Prices for inland consignments of letters weighing up to 20 grams are very differentiated between the Member States of the Union, ranging in 2003 from 0.26 euro in Spain to 0.65 euro in Finland. Such differences, which arise not only from different situations and costs, but also from different histories, show that the postal market is more a juxtaposition of national markets than a genuinely integrated internal market with convergence of prices. Disparities of charges are more accentuated for 100 grams letter mail (from 0.46 euro in Portugal to 1.44 euro in Germany) and are even greater for parcel post shipments.

Prices for 20 grams letter mail to destinations in other countries of the EU presented the smallest differences in early 2003, ranging from 0.46 euro in France to 0.65 euro in Finland. In early 2003 Finland, France, Germany and Italy aligned their intra-European prices with their inland mail prices, while Spain, Portugal and the United Kingdom had established different scheduled charges.

Hungary and Poland show relatively low prices for inland shipments for 20 grams (respectively from 0.15 euro to 0.17 euro and 0.30 euro). However, precautions should be taken with regard to price comparisons with countries in the Euro zone due to approximations of the conversion of the Polish and Hungarian national currencies.

A differentiation may exist between consignments of products to a destination in one of the 15 current Member States and consignments to the two future members of the European Union studied here: generally, there is no alignment of prices - and delivery times - between mail to new and “old” members. Inversely, Hungary and Poland present prices of shipments to EU countries as international tariffs. Once the enlargement realised, the question of the alignment of these prices to domestic ones will have to be raised, even if it is not in the same period of time as for EU countries.

Social accessibility

In the postal sector, specific provisions concerning social accessibility are quite rare because it is not a sector where the issue of social accessibility is very relevant: the access to the service is generally possible independently from social conditions.

However, concerning blind and partially-sighted persons, the 1997 EC Directive stipulates that “*the process of liberalisation should not curtail the continuing supply of certain free services for blind and partially sighted persons introduced by the Member States*”. The 2002 EC Directive continues to stipulate possible derogations for this category of persons. Concerning disadvantaged or handicapped persons or specific categories of the population with mobility problems, the possible measures are left to the discretion of each Member State, mainly to the operators or by a State-operator objectives agreement.

Initiatives concerning accessibility of post offices for persons with handicaps are a matter decided upon by each Member State. Most of the countries studied are nowadays adopting measures in order to make the old post offices accessible for disabled people; new offices are now built with this requirement.

Territorial accessibility

Concerning the territorial accessibility, the Directives state that the Member States have to “*ensure that the density of the points of contact and of the access points takes account of the needs of users*”. Some Member States are putting in place legislative norms to promote territorial accessibility (e.g., Finland or the planned Ordinance in Poland), certain others allowing the operator to fix its own density of network objectives, if any (e.g., Italy).

The indicators for the number of permanent post offices per 10 000 inhabitants and letter boxes per 1 000 inhabitants show marked disparities between countries. The number of post offices per 10 000 inhabitants - for an EU average of 2.4 - ranges from 0.91 post offices per 10 000 inhabitants in Spain to 3.7 in Portugal. Numbers of letter boxes per 1 000 inhabitants - for an EU average of 1.8 - range from 1 letter box per 1 000 inhabitants in Spain to 2.2 per 1000 inhabitants in France.

Most countries have recently reorganised/streamlined their post office networks. Between 1997 and 2001 for instance, the number of permanent post offices per 10 000 inhabitants fell slightly in Finland, France, Germany, Italy and the United Kingdom; moving in the opposite direction, increases took place in Portugal, Hungary and Poland.

Concerning outermost regions, postage stamp prices are aligned with the parent-country charges for letters between those regions and their parent country, but this characteristic does not apply to letters to destinations in other Member States of the EU (except in the case of France for letters weighing up to 20 grams), nor to parcels. However, they are in no case aligned with real costs.

The prices charged for mail sent from a country of the European Union to an outermost region of another country of the Union are not always aligned with those charged for mail to a destination in the parent country (France, Spain or Portugal). Spain also differentiates the prices of mail to the Portuguese islands and mail to the French Overseas Departments. Finally, it is important to note that the question of territorial cohesion is not taken into account for offshore islands in the same way as for the outermost islands and regions. Indeed, most of the studied countries take account of the geographical criterion in order to fix prices. However Germany, for example, adopts the same prices for letters to the whole European continent, including the outermost areas previously mentioned.

Continuity and quality of provision

As far as the continuity of service is concerned, the EC Directives state that the universal service providers have to guarantee a minimum of one clearance and one delivery a week every working day and not less than five days a week. It is generally applied in all of the studied countries, even if some allow for possible exemptions to that measure (for reasons of geography) without any existing data. Only Finland presents quantitative data on the number of households not having the minimum 5 deliveries/collections a week, but it is not significant and due to extreme geographical situations. Concerning quality of service, almost all countries of the European Union respect the quantitative objectives set by the first EC Directive for intra-European mail, but this is not the case concerning the 2003 quantitative objectives of D+1 distribution of inland letters set by the Member States themselves.

The various elements taken together show a general tendency towards the improvement of the quality of the postal service as regards intra-community traffic.

The indicators given in annex to the 1997 Directive as the objective of improving the speed of service for intra-community traffic have shown clear progression: according to the UNEX survey, the delivery rate D+3 for first class cross-frontier mail within the Community moved from an average of 69.1% in 1994 to 92.3% in 2001. The average number of days necessary for a complete transit was 2.3 in 2001 (compared with more than 3 in 1994).

Between 1999 and 2001, progression was in the order of 10 points for “outward” mail for Finland, Italy and Spain; one exception was the United Kingdom, which experienced a slight dip largely ascribable to most of the countries of destination and already begun in 2001.

The most conspicuous improvement for “incoming” mail concerns Italy; the improvement is more than 5 points for France and Finland.

Concerning inland mail, the delivery rates for first-class D+1 letters are quite uneven: Finland has the best result with 96% and Spain the worst with 69,2%.

Recommendations

European integration cannot be limited to organising the juxtaposition of national postal service markets. As set out in the 1997 Directive (defining a higher level of universal service, setting targets to improve the quality of intra-community service), it stood to gain from embarking upon discussions on cohesion policy issues on several interests and challenges of an economic, social and territorial nature so as to promote the cohesion of the European Union in its entirety and for each of its territorial components:

1. How dovetail together the local-regional, national and European levels of organisation and regulation of the postal sector? Regulation of the postal sector is now decided at European level, even if each Member State has leeway for incorporation into national law, for example as regards the extent of the reserved sector, or to take due account of the diversity of physical and human geography of its territory. Similarly, each Member State defines and implements the system of regulation of the postal services sector. Under these conditions, is there not a risk of foundering in increasing distortions thwarting the cause of cohesion?
2. Should we not now be considering provisions allowing the development and updating of the content of the universal service in the light of technological change and the needs of its users, citizens and society as a whole, which supposes mechanisms for the monitoring and evaluation of the decreed apparatus and for registering social needs?
3. Such updating of the content of the universal service must not be restricted to the sole area of the postal services: substitutions are under way, for example, between traditional mail and electronic mail, which implies cross-cutting investigations between the usual sectors; so, it should be better to define a universal service of communication.
4. So far, the costed objectives of Europeanisation embodied in the directive are limited to intra-community postal traffic. The 1997 Directive includes special exempting provisions for free provision of services to blind persons. Each Member State further implements special provisions for the accessibility of post offices to persons with handicaps and, where necessary, provisions guaranteeing minimum postal presence in each municipality. However, is it not time that the European Union sets about defining, at its level, more ambitious and more precise objectives as regards cohesion, and more particularly social accessibility in favour of certain disadvantaged groups; and territorial objectives for remote areas or for areas with special needs?
5. Is it not time to consider, in the way in which each country has set about it in the context of its history of national integration, not only the maintenance of national policies towards the equalisation, but also towards the progressive European

unification of postal charges, at least for services covered by the universal service? (This progressive unification could be accompanied by the creation of a single stamp usable in any point of the European Union, which would symbolise European integration for the citizens in much the same way as the Euro). Ought not the present stage of European integration warrant the activation of compensations and solidarities between areas and operators enjoying favourable geographical and demographic conditions and those that have to cope with more difficult conditions? Ought not the policy of cohesion, as a powerful element of a will to convergence, to be integrating this course?

6. For intra-community postal traffic, for which improvements of quality and efficiency remain necessary, should we place our trust to the free play of market forces and/or on the good will of the operators? If we mean to improve the efficiency and quality of intra-community traffic, should we not be exploring the possible creation of a European service and a European operator, completing their activities with those of traditional operators without necessarily replacing them²¹?
7. Should we not ask the question as to what stimulus operational structures may exert in cross-frontier areas in the improvement of the efficiency, speed and quality of traffic (direct cross-frontier links), rather than - here once again - blandly assuming the good will of the operators?
8. Turning to the 7 outermost Portuguese, Spanish and French regions, each Member State has hitherto considered them to form part of the national territory and thus to come under parent-country scheduled charges, regardless of any cost differential, in any case for 20 grams letter mail. The other Member States generally consider the outermost areas, in particular the French overseas departments and territories, as not falling within the scope of the “parent-country” charges. Should not the policy of cohesion bring about a situation whereby all Member States make allowance for the island regions in the scheduled charges for mail to destinations in countries belonging to the European Union²²? The grounds of the 2002 postal directive introduced a reference to the island regions, absent from the 1997 Directive. Over and above provisions relating to scheduled charges, ought not the European Union to be making more general provisions for islands as regards economic, social and territorial cohesion?
9. Regarding the ten States now entering into the Union, the examples of Hungary and Poland confirm that the charges for mail to destinations in Member States hitherto came under “international” charges and that the Member States did not apply the full EU charges to mail for destinations in the new Member States. The European Union should press for unification of postal charge zones and delivery times on 1 May 2004, including all the Member States, as a clear sign of the integration currently in progress, even if exemptions may be contemplated as regards time limits for the new members so as to facilitate their gradual adaptation.

²¹ The United States of America have a Federal Post Office.

²² Given the low volumes of mail, this measure would have a reduced cost for the post offices concerned.

10. The European policies are designed to meet the present or future needs of consumers, citizens and society. Is there a need for measures allowing consumer-citizens a guarantee and the respect of their rights? Certain other countries have taken action towards a Quality Charter defining the obligations of operators and means of redress, or even compensation, in case of defaulting on obligations. Others have appointed “mediators” to facilitate the processing of complaints and disputes. In several cases, concerted action has been institutionalised with organisations representing consumers. Should not the European Union be fostering the further development of these actions, or indeed the creation of a European Charter?
11. What responsibilities and structures at European level as regards the system of regulation of the postal sector and evaluation of performances with due regard of the principle of subsidiarity? The postal directive of 2002 asks the European Commission to bring out an evaluation and forecast report before 31 December 2006 on the impact on the universal service of the creation of the internal postal market in 2009²³. The time would seem to have come to open discussions on the criteria of which account must be taken, among which the criteria of national and European cohesion seem crucial, and on the rules and procedures for the preparation of that report, especially concerning the participation of all stakeholders in the cast.

3.6 Telecommunications

Access to a raft of top drawer telecom services throughout the European Union at affordable prices is a key factor in the improvement of social, economic and territorial cohesion. The fact is not lost on the EU authorities, as witness the universal service directive (Directive 2002/22/EC) that defines several universal service obligations: availability of universal service, provision of access at a fixed location, availability of directory enquiry services, directories and public payphones, special measures for disabled users, affordability of tariffs, quality of service.

Universal access to telecom is clearly justified as a redistribution policy instrument, or as an instrument for the pursuit of regional policy, but it may also be justified purely in terms of efficiency, invoking simply the club effects that characterise telecom services. It may also be considered as a necessity for the good functioning of the individual and of the democracy and for reinforcing popular adherence to regional, national and European society.

Generally speaking, it may be said that the Member States - plus the two accession countries of the study - are in compliance with the universal service obligations as described in the latest directive. In many cases, however, problems persist with two elements.

²³ A proposal will (or will not) confirm the date of 2009 for completion of the internal market for postal services or define another suitable step along this road in the light of the findings of the study.

First, in some countries the national law provides for a comprehensive directory and a comprehensive directory enquiry service. However, these services are not really “comprehensive”, and their mode of financing is still in doubt. This cannot do cohesion any favours: since users are now free to choose from among several fixed and mobile operators in all countries, the absence of comprehensive directory services tends to compartmentalise available information and reduce overall cohesion.

The second element, not fully implemented at national level, relates to the special measures to ensure that consumers with disabilities and consumers from low-income groups should have access to telecommunication services. Such measures are usually not very broad-fronted. They have been implemented with financial difficulties. As to cohesion it must be borne in mind that these measures are essential, all the more so now because we are moving from a price-averaging system based on a strong national solidarity to cost-based prices that should be accompanied with special measures for social assistance.

Regarding specifically the accession countries (Hungary and Poland), regulation should be improved in general. In Poland, in particular, many technical, financial and regulatory problems must be solved in order to pave the way for full inclusion of the people of Poland in EU cohesion for telecommunication. More particularly, improvements also seem to be necessary for quality of service and cost-calculations (and for possible funding mechanisms) of universal services.

Universality and general accessibility

The coverage of population and territory in the nine countries reviewed in this report by fixed and mobile networks is very high; mobile coverage in all countries is now close to fixed coverage. However certain isolated areas are still not covered, e.g., some very sparsely populated rural areas (especially in Poland for the fixed network). The penetration rate is also very high for both networks but, partly due to a substitution process that has started in certain countries and for certain parts of the population, mobile penetration is now higher than fixed penetration in all countries. Because of a very high rate of growth (for example more than 100% between 2000 and 2002 in Poland and Hungary), mobile penetration rates are expected to reach 90% or even 100% in most European countries in a very near future. In 2002, the lowest rates of mobile penetration in the nine countries covered by this study were 36% in Poland, 65% in Hungary and France and 72% in Germany. In the five other countries the rate was over 80%.

Thus far, however, the basic obligation stated in the universal service directive is the universality of telephony at “a fixed location”, usually and implicitly understood as the fixed network telephony service.

It may therefore be considered that a subsequent version of the universal service directive should more explicitly leave open the matter of the type of network and technology with which the basic telephony service is to be delivered. This could equally well be delivered by a fixed or a mobile network, depending on which presents itself as the most economic solution for the provider(s) and customers. In those (limited) areas where there is still no fixed telephone network coverage, it would in fact - more often than not - be more economic to install a mobile network to deliver the telephone services, and other services

could follow in the wake. It should also be possible to deliver broadband and internet services via mobile networks (UMTS) and terminals.

A further advantage of universal services via mobile network could be the relatively easy add-ons of new services such as SMS, which could also be socially attractive for improving the overall cohesion (a cheap messaging service for all users over the length and breadth of Europe) and as particularly useful for persons with disabilities. Seen thus, SMS should be made more user-friendly, e.g., with adapted terminals for the elderly and for persons with disabilities. Be that as it may, mobile phones are easier and much more interesting than fixed connections for many elderly and disabled persons: a blind person losing his/her way may call for help, a person who often loses his/her way can be called by others, wheelchair users can take a trip to the countryside and still be able to call for help, ...

Regarding the rate of internet penetration which shows also a very high rate of growth, it ranged in 2002 from 10% in Poland to 50% in Finland. Only two countries among those surveyed in this study (Spain and the UK) have made provision for (but not really applied) special measures to stimulate universal internet access. However, it is clear that not only telephony but also internet services can make a contribution to social and territorial cohesion by allowing rapid electronic exchange of letters (e-mail), access to all types of information, education, ...

So, in order to stimulate social and territorial cohesion and future economic development, it might be useful to consider the explicit inclusion of internet services such as e-mail in future universal service obligations. As with telephony, should be left open the issue as to the type of network and technology by which internet services are to be delivered; and it might equally well happen with a fixed, mobile or broadband network. Also, public internet access points should be considered as a new universal service, in particular for those persons and households not having a personal computer.

Turning to broadband, coverage and penetration remain relatively low, mainly because it is a new technology and thus requires high investment. However, in order to stimulate broadband, the Barcelona European Council called upon the Commission to draw up an eEurope Action Plan, focusing on the widespread availability and use of broadband networks throughout the Union by 2005. This eEurope Action Plan 2005 sees competition as a key factor in the creation of markets for broadband. There is also the underlying realisation that there will most likely be territorial disparities in access to broadband if market forces are given free rein. Therefore, this Plan states that Member States in co-operation with the Commission should support deployment of broadband in less favoured regions.

Finally, public payphones are still very important for social affordability, accessibility and cohesion, especially in rural and remote areas. In general, however, use of payphones is decreasing probably due to high mobile penetration. Steadily diminishing revenues incline most operators to reduce the number of payphones and not always in a controlled manner. However, this turn of events should in fact be carefully evaluated by the regulators, preferably in association with the local authorities, to maintain social accessibility and cohesion, even in more remote areas. For example, in small French municipalities, removal of a call box is subject to authorisation by the mayor.

Affordability and price equalisation

Except in Finland, there is some price regulation of the end-user voice telephony rates charged by operators with significant market power. This may include a geographical averaging. This is for example the case in France where the geographical averaging accounts for half the total costs of the universal service.

Regarding price trends and affordability indices, the outlook for low-income and low-intensity users is not very positive: even if most prices now seem to be following a downward gradient and affordability indices are edging slowly upwards, operators are trying to compensate the loss of revenue from long-distance and international calls through increasing monthly subscription charges, fixed costs and, in most cases, local rates. Besides, we may mention that in Hungary and in Poland, the prices for both fixed and mobile calls are still much higher than in other countries.

We should also point out that providing universal service with both fixed and mobile networks may have consequences for the affordability of telephone services or may require special pricing policies. The question of level of interconnection costs between mobile networks and between fixed and mobile networks should be addressed in this perspective.

Social accessibility

Cost calculation and control of the universal service (and its possible funding mechanisms) by the regulator should, in theory at least, already militate towards affordable prices for the basic telephony service. However, most countries also apply special tariffs or reductions, mostly intended for users from low-income groups or, in some countries, for all users with a “low use” profile. One possible future approach could involve the creation of a “social package” including, for example, the monthly subscription and a limited number of minutes (e.g., with pre-paid card), which could again be independent if it is telephony service from a fixed or mobile network. This concept might also be extended to future new universal services such as e-mail (perhaps with adapted limitation of the number of mails or data volume).

Concerning users with disabilities, in almost all countries surveyed in this study there are some specific provisions in terms of directory and directory enquiry services especially for the blind. It may also be recalled that the development of mobile phones is quite positive for disabled persons.

Territorial accessibility

Different cases demonstrate that some areas will require additional efforts to develop territorial accessibility, especially in rural districts and remote areas. This is the case in Poland where some villages (444 in 2000) have no access at all to public fixed telephone networks. Concerning mobile coverage some uncovered “white” areas do in fact exist in all countries. These uncovered areas represent 22% of the territory in Spain and 17% in France. The uneven spread is even more conspicuous when we look at broadband coverage. For example, in late 2002, 26% of the French population, or 15 million persons, live in communes with zero broadband coverage.

In fact, it would be most useful to have more information on the areas and the number of people not covered by fixed mobile and broadband. Once these “less favoured areas” are better identified, their coverage with fixed, mobile or broadband could be further stimulated partly with European support. A Commission staff working paper was published in July 2003 dealing with this very problem: “Guidelines on criteria and modalities of implementation of structural funds in support of electronic communications”. This document states that ERDF support for electronic communication infrastructures should focus on rural and remote areas otherwise neglected under free market conditions. It further specifies that such support should adhere to the principal of “technology neutrality”, and there is explicit mention that the use of mobile telephony must be extended to cover such uncovered areas.

Continuity and quality of provision

Consumers have a fairly positive assessment of the quality of telecom services. However, they tend to consider that access to these services is becoming more difficult (or are they becoming more demanding?). Far-reaching quality improvements are still required in Hungary, to say nothing of Poland.

Recommendations

The telecommunications sector is now witnessing rapid development of new technologies and services. The concept of universal service should evolve accordingly so as to maintain social, economic and territorial cohesion. Making due allowance for the findings and conclusions of the study, the following recommendations are therefore made.

1. Regarding the universal telephony service, any attempt to hammer out a future version of the universal service directive should expressly leave open the issue as to what type of network or technology via which this basic service is to be delivered (fixed, mobile, wireless, broadband, ...).
2. If we hope to attain full territorial accessibility and cohesion for present (and any possible future) universal services, more information must first be collected on “less favoured areas” and on the effective numbers of persons not covered by any type of fixed or mobile network.
3. We might also consider the inclusion of an internet connection with an e-mail service (and address) as a universal service besides telephony. The preferred service could be a matter of the user’s discretion. Internet telephony and e-mail could become the “integrated” universal services of the future.
4. As for internet connections to households, it might also be useful to recommend an explicit minimum bit-rate (even if it is only a “low” (standard) bit-rate of, e.g., 9.6 Kbit/s), since this would (i) harmonise national regulations and (ii) stimulate national and European deployment programmes, especially in the accession countries.
5. As with payphones (now increasingly “few and far between”), universal service obligations could also be defined for public internet access points, e.g., in libraries or

in post offices. This would make internet and e-mail available to persons and households not having an internet terminal or PC and to persons with low-incomes, thereby also stimulating territorial and social cohesion through the internet.

6. Since payphones are still very important in terms of social accessibility and affordability, in particular in “less favoured areas”, the trend for the removal of “non-economic” payphones should be carefully evaluated by the regulators, this preferably in consultation with the local authorities.
7. Since there is a clear trend for fixed telephony costs, such as monthly subscriptions and - in most cases - also local call rates to increase, this trend should be followed and controlled by the regulators as a basic mechanism for social affordability.
8. A further instrument of social accessibility and affordability could be the creation of a “social package” which could, e.g., include the monthly subscription and a limited number of minutes (e.g., with a pre-paid card). Such a package could also be developed for fixed and mobile telephony and - in theory - also for internet (e.g., with a limited volume of data). This package could then be offered to all “low-use profile” users and, in addition, to users from the lower-income groups. The package could be paid through the local or national social security network .
9. Besides investments from the operators, the Member States and the regional and local authorities, the European Regional Development Fund (ERDF) could also prove to be a very useful instrument for the funding of such new proposals, more particularly for the development of the coverage of telecommunication networks and access points in remote areas, especially in accession countries.

4. General conclusions: contributions of services of general interest to economic, social and territorial cohesion

A fundamental point to be made at the outset is that cohesion cannot be measured by sectoral studies alone. Cohesion as a whole depends on a complex set of conditions, including relative income levels, security of employment, and equality of treatment, as well as the distribution of other services such as housing, education or healthcare.

The services provided in each sector operate in this general context, and have important contributions to make to cohesion, but many of the issues have to be addressed by other public economic and social policies. Energy providers, public transport operators and telecommunication companies must attempt to provide services that can be afforded by the poorest, but these measures cannot by themselves deal with the problem of poverty. Cohesion needs support from non-sectoral policies and instruments, at local, national and European level.

The cross-sectoral nature of cohesion is reinforced by another general point emerging from the survey, and that is the fact that many of these services are to some extent substitutable for each other or other services. Post, fax and email and even text messaging are clearly to some extent alternatives; rail and bus transport, or electricity and gas, are other examples. This affects the evaluation of affordability, for example: a certain price level for electricity may be acceptable in areas where a cheaper alternative (gas) is available for cooking and heating, but if the electricity has to be used for these purposes then the same price level may create an expensive burden for many homes. These inter-relationships are emphasised further by technical developments: the most obvious case is mobile telephony, which has introduced an entire new form of alternative to fixed line telephones.

A further general conclusion is that the introduction of market principles in these services, besides positive effects notably on territorial coverage, technological development, affordability and service quality according to the sector, may operate against cohesion. It creates the opportunity and incentive for companies to seek to serve the most profitable segments of a market, and avoid the high costs and low profits of serving poorer customers or more isolated communities, as noted with broadband services in France where a three-speed pattern is apparent in different types of area.²⁴ The market preference for cost-recovery pricing also mitigates against the use of cross-subsidy in solidarity pricing, as noted in relation to local transport routes offered separately through competitive tendering, which 'ring-fences' the costs and profits of the more attractive routes; another example is the practice of energy companies in the UK to charge

²⁴ Remote areas are not covered « because of “economic” reasons. The maps of the cumulative mobile coverage of the UK, Poland and Hungary show that a considerable number of uncovered “white” areas do, in fact, exist....The uneven spread is even more conspicuous when we look at broadband coverage. ...a three-speed France is emerging, with well-covered “competitive” zones, approximately 2% of the territory and 32% of the population. These are the main conurbations. Beside these “competitive” zones we have the “opportunity” zones, approximately 20% of the territory and 42% of the population. ...Finally, there are the “fragile zones”, approximately 78% of the territory and 26% of the population. These, in the main, are rural areas, but may also include certain less densely populated areas in the outskirts of urban centres. These zones are characterised by the lack of technology supply. » (see Sectoral report on Telecommunications, section 7).

consumers with prepayment meters - generally the poorest - more for their electricity than customers who pay by direct debit - generally the richest.²⁵

4.1 *Accessibility and affordability issues*

Four aspects of accessibility were examined throughout the study: universality and general access; price affordability; social accessibility; territorial accessibility. Where it is relevant, we will distinguish between the effects of infrastructure on accessibility and the effects of the level of service on accessibility. Each section will end with a summary table highlighting the main features and trends common to most countries.

4.1.1 *Universality, general accessibility and needs*

In the sectors studied, the coverage of services is very high, but the purely sectoral measure of coverage is not an adequate indicator of how well people's needs are being met, or whether people in remote regions are as well served as those in urban centres, or as a basis for horizontal comparison of provision between different countries and regions of Europe. There are a number of reasons for this.

Firstly, people's needs are not defined by a particular form of service. People need heating for their homes in winter, they do not need electricity as such, it is only one means of satisfying this need; they need to be able to travel easily and cheaply in their locality, whether by bus or metro or tram; they need to be able to communicate, by voice or by message, whether electronic or on paper.

Additionally, there are other public interests at stake in determining the optimal choice of the type of provision, some of them being more "sustainable" or favouring better mobility than others. So for example, public policies should favour the positive externalities of some forms of transport, or energy generated from renewable sources. The relative costs of substitutable systems may also affect decisions on coverage: it may be far more cost-effective to use mobile telephony to provide services in remote regions.

There are also differences in what is meant by access in different sectors. In the case of transport, access to bus or train cannot be located at each household, and so equal access is not possible for everyone, by contrast with electricity or postal delivery, which apart for some exceptions can be provided to every household.

The needs of people may also vary depending on location. In the case of energy, needs are very dependent on climate and so quite different in northern and southern Europe in terms of need for heating, cooling and lighting. Moreover, alternative fuel or district heating

²⁵ « Small poor consumers, who have difficulty paying their bills ... are not attractive and are likely to be charged the highest prices... This aspect of the impact of competition on poor consumers seems to be already apparent in the UK... Consumers [using prepayment metering schemes], generally the poorest consumers, are being charged at least 10% more for their energy than the richest consumers, those that pay by Direct Debit... in 1998, the year retail electricity competition began to be phased in, small consumers paid 2.35 times what large consumers paid, but by 2002, this ratio had increased to 2.69 » (see Sectoral report on energy - Electricity and gas).

exist in some cases but not in others, which alters the significance of access to one particular energy source.

Within this context, the general picture in terms of the development of access to the sectors is mixed. There are positive developments in air transport, resulting from new modes of delivering the services (“low cost” aviation serving regional airports, with a particularly positive effect on cohesion); in local transport, due to the modernisation of existing services (local public transport, with investment in new buses or the construction of subway lines or special bus or tram lanes, separated from the rest of the traffic); and in telecommunications, due to the development of mobile networks and services, broadband and internet.

There have been negative changes in the rail sector²⁶ and the postal sector because of a relative decline in market share in most countries covered by CIRIEC’s study, resulting in the closure of stations and post offices in sparsely populated and remote areas. The alternative services put in place (coaches, taxis, post buses or post counters in shops) in those areas were not evaluated by this study. There has also been a failure to develop a comprehensive telecommunication network in Poland, where some communities in remote rural and sparsely populated areas are still not connected to a fixed telecommunication network, which creates problems for the overall economic development of such areas and their future competitiveness.

In spite of possible willingness of public authorities to reduce the inequalities in attractiveness of territories, disparities in service provision are likely to continue growing, for three reasons. Firstly, rich regions will always invest more in services than poor and remote regions, and the differences will be more pronounced after EU enlargement to include accession countries. Secondly, competitive tendering exposes the cost of connecting remote areas and low-intensity users and so makes it less attractive to bid for areas with low-demand and high cost, compared with city centres and suburbs. Thirdly, investment is concentrated into high-usage services, lines or connections, to the detriment of low-intensity, sparsely populated, remote, etc. areas.

Finally, we note that it is easier to introduce cohesion measures into sectors which are growing (mobile telecommunication) and thus benefitting from economic expansion rather than those which are shrinking (rail and more recently in postal services).

²⁶ although the development of high speed lines is a positive element in terms of decreasing transportation time between cities (and thus enhancing cohesion), but limited to a few cities - and to the expense of links between smaller cities - and to a higher price than preceding existing services. This is particularly true for transborder rail lines that are not offered anymore under normal service.

Table 4.1.1 - Summary table on **general accessibility**

	AIR	RAIL	LOCAL TSPT	ENERGY	POST	TELECOM
Infrastructure offered and available	More airports in use, but need of better local access to regional airports	Investment in infrastructure good at inter-city level, negative in some rural areas	Good situation where modernisation of existing network	No particular problem with electricity Gas not available everywhere	Closure of some post offices, especially in sparsely populated areas	Very good considering the development of mobile networks
Service provision	Good connections to bigger or profitable cities due to low cost aviation; existence of PSOs, important for remoter services	Problems with sparsely populated and transborder services	Speed of traffic requires separate lanes	No particular problem for electricity	Good for now...	Positive development in mobile services

4.1.2 Affordability

It is difficult to make generalisations about recent trends in prices, as the experience varies across different sectors. One reason for this is the different mix of inputs in each sector, which affects the cost pressures. This factor also makes it important to avoid simple attribution of price changes to structural features of the sector: for example, variations in fuel prices are the greatest influence on the final cost of electricity.

The notion of affordability is itself subject to social changes. Price levels vary according to countries, regions, time, and technological evolution, but the question of affordability is complicated by changes in people's willingness to pay for a given quality of service, which may produce a gap between evidence on price levels and evidence of consumer satisfaction.

In the telecommunication sector, for example, the Eurobarometer surveys showed in some cases that user satisfaction had diminished, even though technology had improved and prices had fallen. Thus, users' expectations may evolve over time, expecting ever-improving quality and lower prices.

Affordability indices are constructed for several sectors (telecommunication baskets, fuel poverty indexes²⁷) and surveys are made, but these should be undertaken more often according to the same methodology in order to have series comparable over time.

²⁷ i.e. the percentage of households that spend more than 20% of their disposable income on energy. But the hypothesis on the annual consumption for low income being about a third of the consumption of an average consumer is questionable; indeed, low income consumers may be large families or people living in poorly insulated houses.

Moreover, for comparability reasons, the indices should be calculated using purchasing power parities.

For telecommunications, most of the prices are going down and affordability indices are slightly moving up, but the operators are trying to compensate for the loss of revenues in long distance and international calls, by increasing subscription and fixed costs and in most cases also the tariffs for local calls. These are not very positive developments for low-income users and low-intensity users.

In the energy sector, the recent trend in prices has been an overall decline, but in coming years if prices in electricity and gas increase, for example to pay for improved environmental performance, there may be a need to increase social support.

In the electricity sector (as also for telecommunications), disconnecting consumers appears as the most severe problem. Solutions developed by providers like pre-payment metering prevent formal disconnection, but this conceals rather than solves the problem of affordability, since the consumers then choose to disconnect themselves when they cannot afford to buy electricity, and it is very difficult to collect data on this phenomenon.

In rail transport, there is a great diversity between countries in price accessibility and affordability. Prices per 100 km show a great spread, with a ratio between lowest and highest of 1 (Hungary) to nearly 10 (UK). Adjusted for purchasing power parities, the ratio is 1 (Italy) to 5 (UK) for regional transport, and 1 (Italy) to 6 (Germany) for inter-city transport. The price evolution of high-speed trains in general cannot be considered as positive.

In the postal sector, due to historic or geographical reasons, the prices for inland consignments of letters weighing up to 20 grams are very different between the Member States of the Union. They range, in 2003, from 0,26 euro in Spain to 0,65 euro in Finland. With respect to tariffs for sending a letter to an EU country, Finland, France, Germany and Italy set the same tariff for domestic and EU letters, while Spain, Portugal and the UK set different prices.

There are three further issues arising from the studies overall.

- The question of how far variations in prices between regions should be harmonised remains a political decision at national and also EU level: for example, the possibility of an EU-wide mechanism for financing the costs of intra-European airline routes covered by public service obligations.
- It also remains a matter for political decision who pays for the harmonisation or equalisation of prices, and how. This can take the form of providing 100% subsidy so that services are free to users, as has been tried with local transport in some cities, or at the other extreme full cost recovery.
- A similar question relates to the variation in quality of services available in different countries, especially in accession countries compared with existing Member States. Should quality standards be set at EU level, as currently the case for postal services?

General affordability may in fact be a better issue to address than social or territorial accessibility, as emphasised at the start of these conclusions, by promoting the overall economic well-being of all citizens and regions. General measures for all are easy to implement and may bring about better results than a large set of specific measures for

specific categories with lots of transaction and implementation (administrative, control, evaluation, etc.) costs. Indeed, the enforcement of lots of different categories of tariffs is difficult to implement and to use by all categories of citizens (see also transparency of tariffs - section 4.3.7).

Table 4.1.2 - Summary table on **affordability**

	AIR	RAIL	LOCAL TSPT	ENERGY	POST	TELECOM
Service provision	Fares fall, consumers satisfied	Price levels relate to GDP; tariffs lack transparency, low satisfaction on quality of service	Mixed picture – cost cuts from tendering, price rises from lost subsidies	Prices decline (fuel costs), but forecast to rise; uncertain effects of market. Problem of pre-payment metering schemes	Prices vary across EU, no convergence	Prices have fallen, but consumers less satisfied. Fixed costs and subscription tend to increase, causing a problem for low-intensity users

N.B.: Infrastructure costs were not covered by this report.

4.1.3 Social accessibility

This criterion covers only specific categories of population, and the provisions and measures taken to equalise the access for these groups, to correct the impact of price or quality aspects of the service. The picture is again very varied across sectors and countries (and regions). In the postal and telecommunication sector, special price and billing conditions as well as various facilities are put in place for blind people, and positive initiatives have been carried out in most countries to favour access for persons with disabilities.

New technologies may provide opportunities for the development of universal service (US) and public service obligations (PSOs) as well as positive cohesion policies: for example the extension of mobile systems with SMS messaging capabilities may be of great benefit to the disabled, as well as creating a European network for exchange of messages; moreover, the mobile phone is in itself a positive development for persons with disabilities.

Especially in the public transportation sector, numerous and quite heterogeneous measures are used to favour the use of collective public transport, be they in terms of prices or equipment. National legal provisions and regulations are used in the UK (for disabled) and Finland (for elderly and disabled); in other countries the provisions are set at regional or local level. The main issue remains nevertheless their effectiveness in making collective means of transportation relatively attractive compared with the private vehicle, with its advantages in terms of accessibility, mobility, and time of use. Here the collective interest enters in conflict with the satisfaction of private interests.

As far as the energy sector is concerned, it appears that following liberalisation, the systems of national price equalisation have had to be replaced by other more targeted devices, but for different reasons, Member States have put off taking action in this respect. In the telecommunication sector, special measures for low-income categories of the population and low-intensity users should be promoted, especially with a potential deterioration of fixed networks and a price increase of connection fees.

There is a potential role for policy initiatives at EU levels in favour of harmonised minimum requirements, especially for low-income categories of the population, but implemented nationally or regionally. The example of the bus and coach directive illustrates the possibilities for the EU to be pro-active and directive in terms of requiring provision for specific categories of persons on a EU-wide basis, in order to harmonise rights and facilities among countries and regions.

Table 4.1.3 - Summary table on **accessibility for specific categories of persons**

	AIR	RAIL	LOCAL TSPT	ENERGY	POST	TELECOM
Infrastructure offered and available	–	Positive situation and evolution with respect to new trains with special equipment	Positive situation and evolution with respect to new vehicles with special equipment	–	Disabled access to offices	Mobile and wireless technologies allow for easier access
Service provision	Disabled access rules, PSOs require special tariffs	Special rates for specific groups, but not generalised	General affordability important, given range of needs; disabled access varies	Fuel poverty policies vary. Pre-payment meters hide problem	Main issue is for blind	Some 'low-use' tariffs, not easily implemented

4.1.4 Territorial accessibility

This criterion is directly linked to territorial cohesion among the regions of the European Union, especially sparsely populated and remote areas that need to be connected to the main centres of economic and social activity.

Transport and communications services, in particular, are very important in achieving such territorial cohesion, but are also relevant to a range of other public policies, including environmental considerations, sustainable development and competitiveness.

These services are especially crucial to the overall economic development of competitive economic activities in each region and contribute to the attractiveness of the region. Studies have shown that firms' location decisions are based on strategic considerations, with labour costs and taxes less important than factors related to new competitiveness criteria - labour skills, research and development institutions, and infrastructures quality, in particular transport and communications infrastructure. These infrastructure services have thus become important instruments of regional economic development policies for local authorities: the preservation of public services of quality regarding transports, post,

telecommunication and energy supply are necessary conditions to help the less developed regions to restructure and find new growth factors.²⁸

There have been divergent trends in relation to territorial cohesion, and also a range of measures for dealing with this issue. The development of low cost aviation making much greater use of regional airports, appears to be the most positive development in terms of territorial cohesion and inter-regional connections, since it allows large numbers of people to use air transportation and reach a large number of destinations, also contributing to the attractiveness of some less favoured territories. However, it always depends on how far you live from an airport with affordable and attractive connections, and so there has been use of public service obligations on specific routes to maintain connections with islands and peripheral or less developed regions.

However in rail transport and also local public transport in rural areas, the trend is clearly in the opposite direction.

The postal network features a reduction in coverage in rural and sparsely populated areas, but partial substitutes to traditional post offices exist depending on the countries. Unequal treatment concerning price of stamps and delivery times in comparison with the parent-country is noted for outermost regions from most of the EU countries, while those regions have to be taken into account with regards to territorial cohesion aspects.

In telecommunication, there is a divergence between fixed networks and mobile ones: the development and modernisation of fixed networks lags behind in remote areas while mobile networks appear as a potential substitute to ensure coverage of remote areas.²⁹

²⁸ P. Moati (2001), "Localisation des firmes et développement local", Cahiers du CREDOC, n° 159, octobre 2001; P. Martin (1999), "Public policies, regional inequalities and growth", Journal of Public Economics n° 73.

²⁹ The case of Poland is a particular illustration of this development trend.

Table 4.1.4 - Summary table on **territorial accessibility**

	AIR	RAIL	LOCAL TSPT	ENERGY	POST	TELECOM
Infrastructure offered and available	Use of more regional airports	Coverage has decreased	More inter-municipal services, park and ride, but thinner networks in rural areas	Electricity network complete; increasing gas networks.	Reduced rural coverage of post offices	Full fixed coverage, with a few gaps (e.g. Poland); weak coverage for mobile phones in sparsely populated areas, but coverage is increasing
Service provision	Larger number of connections to more areas. Affordability issues for local connections to airports	Lack of timetable integration internationally	Tariff integration is a positive development in some cities.	–	Unequal treatment of outermost European regions	Mobile phones potential substitute for linking rural areas (e.g. Poland)

4.2 Territorial issues

4.2.1 Remote and outermost regions

Remote regions are less attractive to commercial operators in a number of sectors. And, due to specific constraints and the often low population density, making investments and even ensuring the maintenance of existing basic infrastructure, or seeing to its upgrading, is rarely profitable. Following observations were made. The search for competitiveness in postal services has led to a thinning out of the post office network in remote areas; such areas are also less economically attractive to mobile phone operators, broadband service providers, and rail services. Access to telecommunications and broadband services are especially important not only for territorial cohesion but also for economic development: there will be territorial disparities in access to broadband if market forces are given free rein.

To counter market failures, there is thus a need for subsidies for infrastructure in these services in such areas, both from national governments and through the European Regional Development Fund (ERDF), to achieve the goal reducing disparities set out in Article 158 of the treaty of Amsterdam. Both the recent guidelines on the use of structural funds in support of electronic communications (July 2003), and the report on eEurope (August 2003), recommended financial support from Member States and the Commission in remote areas which are commercially underprovided. The pro-active policies of Spain and France, in using municipal, national and ERDF funds to ensure coverage of mobiles and broadband, are good models of what can be done.

Different kinds of support may be appropriate in different sectors. In some cases, support may be needed for cross-border structures in particular in remote areas, in public transport or, for example, postal services between the north of Finland and Sweden. In other cases, such as electricity, outermost regions would be expected to benefit more from investment in local generation capacity than from greater transmission capacity for internationally traded electricity. In other cases, such as remote regions where neither rail nor coach services are commercially viable, then direct public subsidy or provision of services may be needed.

4.2.2 Accession countries

There are specific issues in communications, transport and energy in relation to accession countries, which are mainly connected with the lower levels of economic development, this being typically a matter for European regional cohesion policy.

Accession countries have lower levels of GDP per capita - in Hungary and Poland about 20% of the EU average.³⁰ The costs of services is thus higher in relation to income. The cost of telephone calls in Poland and Hungary is about twice as high as in OECD countries. About 10% of Hungarians suffer fuel poverty, on the UK definition of that term³¹ - and consumption of electricity is much lower. Transition to market economies has led to a reduction in State subsidies, which have increased public transport fares in several cities.

The problem is one of cost of service, not infrastructure, and affects both social cohesion and economic development. Subsidies currently provided for disadvantaged consumers in Hungary, for example, are funded entirely from national resources. Consideration should maybe be given to use of EU funds in financial aid to energy and telecommunications costs in accession countries.

The development of fixed telephone networks is incomplete compared with existing Member States: however, mobile penetration rates are high. The situation should be monitored carefully, notably on a regional basis, and EU development funds (ISPA for transport and environmental projects, PHARE for strengthening economic and social cohesion, ...) should be available to ensure that the mobile networks are truly an adequate substitute for fixed line development, including in relation to broadband provision, with special reference to the impact on economic activity.

The importance of air transport for development should also be recognised. The EU should consider using cross-border public service obligations, financed by EU funds, to open up more air routes³² using existing regional airports which need to be modernised.

³⁰ According to GDP per capita in pps terms, the gap is lower (40.9 for Poland and 51.5 for Hungary in 2001 with respect to 100 for EU 15 average).

³¹ The UK definition of fuel poverty is : 'a fuel poor household is one which needs to spend more than 10% of its income on all fuel use and to heat its home to an adequate standard of warmth'.

³² considering especially the fact that contrarily to intra-EU city pairs, the number of city pairs connections with candidate countries has not risen, but has indeed fallen in 2001 to below the level of 1996 (see section 5 of the air transport report).

The European Union should besides press for unification of postal charge zones and delivery times on 1 May 2004.

This study covered Poland and Hungary, but there is every reason to believe that the same issues will recur for other States joining the European Union in 2004, and for the next wave of States expected to join subsequently.

Support from the European Union with a view to ensuring cohesion across the enlarged European territory is consequently necessary to allow for future competitiveness and sustainable balanced growth potential over the long run.

4.3 *Other cross-sectoral issues*

A number of other issues arise on a cross-sectoral basis.

4.3.1 Data limitations

The first main issue to study and measure cohesion aspects concerns data in terms of availability and interpretation.

One has to be aware of the fact that liberalisation does not lead itself to transparency and availability of information. More data is now considered as confidential, essentially for commercial reasons, and data is not communicated easily to regulators or authorities, let alone researchers or experts.

In order to approach the three dimensions of cohesion (economic, social and territorial), data is missing on regional level, but even more generally in terms of access to services, comparable data from one country (and region) to another.

There is a special problem concerning remote, low-densely populated or rural areas: mean figures do not show discrepancies between cities and rural areas.

On another level, there are limits in using sectoral price data for international comparisons of efficiency or accessibility:

- for example, electricity price charges are not a measure of electricity company efficiency because world fuel prices are a very large component of final costs;
- existing EU statistics on the relative costs of electricity assume that poor consumers have lower needs than larger customers;
- availability of alternatives affects the importance of price to consumers, and territorial (e.g. in post) or climatic (e.g. in energy) conditions affect the importance of the service.

Besides, other issues arise:

- Experience with many indicators is too little and too short to be confident of interpretation. In particular, indicators set up for technical and for commercial purposes may not be good indicators of the satisfaction of social needs;

- there are differences between improvement in networks and improvements in services. One does not necessarily imply the other and vice versa (e.g. airports and airline connections, electricity transit);
- the time lags in data may give a misleading impression: for example the train accidents in the UK happened although the indicators were at their best level ever recorded.

4.3.2 Substitutability and changes in technology

In all sectors covered services can be substituted by other services. In energy, electricity can be replaced by gas or district heating for many purposes; air transport and long-distance rail transport are alternatives on many routes; post, fixed and mobile telecommunication act as alternative media for a range of purposes. There is further substitutability with other marketed services, including car transport and use of the internet.

One consequence is to highlight the limits of a sectoral evaluation of the impact of services. Evaluating whether the need for heating is met affordably or reliably, requires an evaluation of the availability and prices of all forms of provision; access to telecommunication services may be met by mobile or fixed line services, or in future by internet telephony; access to long distance transport may be met by proximity to a train station or to an airport.

As technology develops, different services become economically and organisationally relatively more attractive. An illustration of this is in areas of Poland where mobile telecommunication services have achieved a greater coverage than fixed telecommunication lines. While public service objectives are formulated in sectoral terms, for example the obligation to provide universal fixed line telecommunication services, these risk becoming obsolete considering technological evolution and cost effectiveness.

Another example is the development of coverage of computer access, which determines access to internet and email communications. The sectoral approach which measures the universality of provision of postal services, but not of computer access, fails to measure the experience of the citizen/consumer in terms of access to substitutable service.

However, substitutability implies somehow interconnections and poses their technical problems. Further, transshipment or interconnections between networks and modes used partially as alternatives or substitutes entail costs that should not be ignored (e.g. fixed and mobile telecommunication networks, interconnecting, switching and transshipment delays in the transport sector, etc.).

A final point is the expectation that the digital divide will grow larger in Europe, without positive action. Older generations will be increasingly disadvantaged as they are least familiar with the computer and internet media which will become more important. This will also be true at a country level, as accession countries enter the EU with a much lower level of infrastructure and computers than existing Member States.

4.3.3 Universal service and public service obligations

The applicability of the notion of universal service and public service obligation varies markedly between sectors. A requirement for universal gas connection, or access to air services, is not appropriate or commensurable with a requirement for universal access to telecommunication or electricity connections or transport. The evaluation requirement should therefore be concerned with access to substitutable services delivering an end good. That end good will not necessarily be defined in sectoral terms.

EU-level universal service obligations are of varying relevance, partly because of near completeness (for example in electricity), partly because of irrelevance, as with gas.

It seems now time to consider developing and updating the content of the universal service and/or the public service obligation in the light of technological change and the needs of its users, citizens and society as a whole, which supposes mechanisms for monitoring and evaluating the legislative and administrative apparatus and for registering social needs. The extension of internet services into every home, for example, whether by fixed line, mobile or broadband, could create a great degree of social and territorial cohesion across countries and across Europe.

It will also be necessary to examine how far liberalisation is compatible with sustaining the financing mechanisms for these USOs and PSOs, which must necessarily involve some form of solidarity financing through either subsidy or cross-subsidy.

4.3.4 Affordability and financing

The criterion of affordability raised issues of pricing, subsidisation and state aid policies across a number of sectors. Moves towards full cost recovery and reduction of subsidies leads to a worsening of territorial and social cohesion. This is reinforced by the finding in local public transport that accessibility for disadvantaged groups is most importantly achieved by general affordability, with targeted schemes less effective.

The question of cross-subsidies is also problematic under conditions of liberalisation. The ability of companies to be selective leads to problems of cherry-picking, so that profitable consumers are offered better terms than those most in need of services for the purposes of social or territorial cohesion, for example in energy; telecommunication companies may shift to higher fixed charges, which cause problems for low-intensity users.

Equalised payment schemes are important for both social cohesion and also for territorial and economic cohesion. A clear example is the development of multimodal ticketing and smart cards across different authorities and networks in local public transport, as an important dimension of affordability and instrument of public policy. Another is the possibility of developing special 'social access' packages for low-income users combining rights to fixed, mobile and internet usage for a fixed low fee and pre-paid card.

One way of dealing with this, tariff equalisation, remains the norm until now in postal services for universal service, but is a matter of variable practice in other sectors. In liberalised energy markets where price regulation has limited the use of cross-subsidy, it

becomes more difficult to support poor consumers, and so the problem of fuel poverty becomes a further demand on social security systems.

The correct level of support from central to local government is also important for territorial and social cohesion. The example of local transport shows that policies that are too restrictive of central government financial support can lead to people in poorer cities in disadvantaged regions receiving less support for local transport fares.

4.3.5 Solidarity and financial aspects

It should first be stressed that following liberalisation, technological evolution and transformation of network industries, solidarity mechanisms underwent changes over time: evolving from a strong national solidarity (with geographical averaging and price equalisation systems averaging out differentials in the cost of service provision) to social assistance measures targeted on specific categories of population and territory. The question of European solidarity now arises.

There are general political questions about the financing of solidarity mechanisms before it is possible to assess or evaluate the successfulness of policies. These include the question of which social groups should be considered for support, and who, by contrast, should be expected to pay the 'full' fare/tariff. The same political questions (and possibilities) arise at European scale, for example in deciding whether to build solidarity between poor and rich regions by European-level financing of train and air routes, for example.

Social tariffs - if they are still too high for some categories of persons - could be paid by welfare programs, for example low-usage mobile phone packages (with prepaid cards). Thus you would have a general low-intensity fare for everyone - which would also not stigmatise poorer people -, but if it is still too costly for some, then the social welfare steps in: the Hungarian Government deliver vouchers for this purpose. This also allows the payment problem to be taken out of the responsibility of the operators.

4.3.6 Trade-offs with other public policy objectives

Some sectors, for example local public transport or telecommunications, are the subject of public policy objectives whose achievement is not measured directly by the accessibility, affordability, etc. of a service: these objectives include relief of congestion and reduction of pollution, searching for new renewable resources, maintaining activities and people in more remote areas, empowering citizens by allowing access to information (via internet). Some important initiatives depend on restricting other rights, for example the charging or exclusion of private cars from cities or bus lanes.

External public policies may apply in other sectors too, for example environmental considerations in energy; or, on another hand, broadband penetration and email access raising issues of public policy in relation to competitiveness, and so become relevant to the evaluation of (tele)communications access.

Developments in these sectors may be driven by industrial policies seeking to create national (or European) ‘champions’ with the capacity to be internationally competitive. The development of the gas network throughout Italy, for example, was at least partly driven by the aim of strengthening the national energy company; the decisions to allow mergers of energy companies in Germany recently may have included considerations of developing strong international companies. This pursuit of industrial policies may have adverse consequences for the sector itself, for example in over-reliance on a particular fuel, or weakening of competitive pressures within a sector. But same levels or goals can be attained with different industrial policies (see energy and environment, pollution, congestion, etc.).

Environmental considerations may also influence policy. For example, the desirability of building more cross-border high-voltage transmission lines has to be weighed not only against the cost of alternatives (such as developing generating capacity in each country) but also against the environmental impact of such constructions; pollution is a factor to be evaluated when discussing the cohesion advantages of more air routes, for example.

4.3.7 Consumer protection and transparency of tariffs

The practice of territorial polarisation - whereby telecommunication or transport companies focus their activities on the most cost-effective areas - makes it more important to protect consumers’ rights to equal treatment.

The use of quality indicators may be limited as a way of regulating monopolies for cohesion, where companies can improve indicators by boosting their urban performance at the expense of neglecting rural consumers. Thus, again, rendering data on rural and sub-regional situations more transparent and available seems a necessary prerequisite to evaluate the contribution of services of general (economic) interest to cohesion.

The expectation that consumers will change suppliers as a way of punishing poor service may not be realistic. In energy, the evidence is that for most consumers, this is a time-consuming and difficult process, which is not worthwhile.

With increasing liberalisation and competition among operators, transparency and understanding of tariffs and price structures will become a more and more important issue for cohesion across the countries and regions of Europe (e.g. rail, telecommunication, energy). The user-friendliness of services and tariffs needs to be regulated, especially for disadvantaged groups such as older people and persons with social difficulties.

It may be necessary to promote coordinated tariff-setting, in order to simplify tariff structures and schemes. The problem is that competition (even with oligopolies) and transparency of tariffs are difficult to match, since competition implies hiding transparency and openness.

4.3.8 Levels of competence and subsidiarity

The role of public authorities in providing infrastructure and running services to achieve public policy ends remains important at all levels - European, national, regional and local.

Each level should contribute as appropriate, and the appropriate level may change with changing conditions. The value of flexibility can be seen for example in the development of local transport services at inter-municipal level in response to perceived needs for greater interoperability as well as tariff harmonisation.

Infrastructure development may be financed through a range of mechanisms - payments by service users, or funds from local or national authorities, and also by EU structural funds. For example, in France, policies to develop mobile telecommunication make use of funds of the telecommunication operators themselves, municipalities, and a national development bank. Different policy options affect the question of the appropriate level, so that for example the development of new electricity generating capacity in each country is appropriately a national level responsibility, development of cross-border systems would be most appropriately (co-)funded at EU level.

The funding of services raises different issues, concerning the appropriate level of subsidy and cross-subsidy, which need to be considered in relation to the arrangements for operating services. For example, the regionalisation of rail services in some countries reduces the potential for cross-subsidy compared with national level services. The Bus and Coach directive gives rights throughout Europe to disabled citizens for access to public transport services, but its implementation depends on funding being provided by national, regional or local authorities. For peripheral regions, access to air transport matters but prices are the issue, which raises the question of the appropriate level of solidarity financing.

The same kind of question can arise in relation to operation or regulation of services. There are examples where national authorities do not efficiently coordinate cross-border operations, for example in postal services and rail, and so towns in border areas lose accessibility to nearby towns: the potential efficiency of transnational coordination should be considered.

4.3.9 Company strategies under liberalisation: diversification, oligopoly, and short-termism

Company strategies in liberalised markets have had varying effects across sectors. In air transport, for example, low cost carriers have expanded the market by creating a new demand from passengers asking to pay less for air transport, giving therewith up some aspects linked to service quality. Traditional carriers have meanwhile seen their market share decreasing within the growing market resulting from the opening new routes and lower fares generated by the low cost carriers. In other sectors, the impact of company behaviour is less clearly beneficial for economic and territorial cohesion.

In energy, for example, companies are responding to competition in their traditional market by a combination of growth strategies - through diversification of their activities (multi-service strategies), and entry into other European markets - and consolidation. Take-overs and mergers are key instruments of these processes and lead to the development of multi-utility operators and oligopolies across a number of Member States and accession countries (and in some cases globally, beyond the borders of the European Union).

This creates two dangers:

- Potential abuse of market dominance to push up prices: avoiding this places greater demands on regulatory systems.
- The companies' own objectives value the short term, for which the market gives valuable indications, to the detriment of the long term, which concerns the public policy objectives of SGEI. Rapid changes in ownership can exacerbate this short-term perspective. It creates a risk of cost reductions happening at the expense of service quality, through emphasis on maximising the returns on investment and reducing the costs of machinery, equipment and human resources.

The use of incentive regulation can exacerbate both these tendencies.

5. RECOMMENDATIONS

5.1 *Cohesion, public service obligations and universal service obligations*

- Universal service obligations (USOs) and public service obligations (PSOs) should be continuously reviewed, evolve with technological and societal developments, and not necessarily be confined to separate sectors. These reviews should be evaluated against the public policy objectives including cohesion and solidarity. But how to ensure the perpetuation and the lasting continuity of financial sustainability of those USOs and PSOs remains the open question.
- Consideration should be given to including internet and e-mail access in a common USO for the post and telecommunication sector. This would be based on objectives of social cohesion, to avoid discrimination against low-income or less favoured people. Other cross-sectoral USOs and PSOs should be considered for example in relation to access to long-distance transport (rail and air) or local transport (bus, rail, metro) within the framework of public policies e.g. on mobility, environment, sustainable development.
- Attention should be paid to interconnections between networks and modes that are used as alternatives or substitutes. Indeed, technical problems of interconnection as well as time and money costs do arise when using several modes in terms of interconnecting networks corresponding to various modes of providing a service (e.g. switching costs in the transport and the communication sector).
- It is necessary to ensure access for disadvantaged groups - older persons, persons with disabilities, low-income, those living in remote areas, disadvantaged suburbs, etc. -, especially because of changes in the solidarity mechanisms related to services of general interest. This is a more pressing issue than the extension of the networks themselves - provided these networks do not shrink or lose quality (e.g. the postal sector network reducing its coverage in rural areas). This issue is clearly relevant in the telecommunication sector, especially because of the price consequences of the co-existence of fixed and mobile networks.

5.2 *Affordability and quality*

- Lack of transparency of tariffs is a widespread problem, partly as a result of competition, which makes it difficult for groups of users such as the elderly, for example, in the rail, telecommunication or energy sectors. Regulatory requirements should be considered in this area.
- General affordability policies are complementary to policies aiming at social or economic affordability or territorial accessibility. Indeed, the overall economic well-being of all citizens and regions, with potential general measures for all which are easy to implement, may enhance and positively catalyse policies more specifically oriented towards cohesion. But one has to be mindful of possible adverse distributional consequences (for some territories or categories of population) of such general measures, for example if rural or low-income populations are required to bear some of the burden of financing urban services of most benefit to middle and higher income groups.

- EU authorities or regulators should be more pro-active and directive in terms of favouring specific categories of persons on an EU-wide basis, in order to guarantee minimum rights and facilities among countries and regions in full respect of subsidiarity, for example in relation to the dangers of pre-payment meters for energy users.
- If continuity or quality standards or requirements are not met, there should be a clear procedure for action by public authorities. To assist this, there should be regular and systematic evaluation of services and clearly stated rights of users and passengers.
- Specific attention should be given to general price level trends, notably in rail and local public transport.

5.3 *Solidarity mechanisms*

- Following liberalisation, technological evolution and transformation of network industries, solidarity mechanisms have undergone changes, evolving away from a strong national solidarity (with geographical averaging and price equalisation systems averaging out differentials in the cost of service provision) towards social assistance measures targeted on specific categories of population and territories. In this new context, the EU, Member States and public authorities should develop clear definitions of their solidarity objectives with respect to services of general interest, in order to identify what solidarity should be developed at each level.
- On the basis of these objectives, the EU should carry out a systematic review of possible appropriate actions and policies for achieving these objectives in relation to services of general interest. Particular actions should be taken for example in the energy sector, especially for low-income users in view of expected price rises in coming years.
- Cost-recovery should not be adopted as a primary objective, since it may preclude either general or specific subsidies required to achieve cohesion and solidarity objectives. Policies should be framed by political choices of which groups should be collectively supported by solidarity mechanisms, whether through general subsidised tariffs, social tariffs designed for low-income users, or social welfare support specifically for the costs of services of general interest.
- Consideration should continue to be given to specific Community provisions to guarantee the same rights in terms of access to and affordability/pricing of essential services for consumers and citizens in ultra-peripheral and outermost regions.
- The EU should maintain and strengthen the existing use of structural regional funds to finance the costs of investments in infrastructure. This issue is particularly relevant for rural and outermost regions, for which specific policies are essential notably in the transport and telecommunication sectors.

5.4 *Accession countries*

- Stronger cohesion policies are needed to allow the integration of accession countries and reduce territorial inequalities between them and current Member States. Further use of structural regional funds to finance infrastructures should be considered.
- Considering technological evolution and its cost effectiveness, accession countries could perhaps be encouraged to guarantee universal access by means of the most suitable techniques (see mobile telecommunication without necessary developing a fixed network).
- EU funding mechanisms should also be used for the provision of collective accesses to internet services - through post offices, libraries etc - which could be extended to less developed regions in the enlarged EU. The objective is to organise and structure the demand for such services.

5.5 *Facilitate cross-border cooperation*

- Where appropriate, the EU should take active measures to encourage the development of cross-border provision of services (e.g. regional cross-border transport services - having suffered or disappeared due to inter-city high-speed substitution competition - or accelerated direct cross-border postal deliveries without having to transit by national collection hubs). The design of these measures should involve the EU and the border regions themselves.

5.6 *Evaluation, data and indicators*

- EU-wide evaluations of all services of general interest (SGI) should be carried out with reference to public policy objectives, including economic, social and territorial cohesion, environmental considerations, and cost, using public participation. These evaluations should address the changing needs of citizens, consumers and society - e.g. for heating, communication, mobility - and relevant technological developments. They should use multiple criteria to reflect the interests and expectations of different stakeholders, and reflect how these interests intersect with each other. These evaluations should assess the effects of the measures taken in European legislation on the EU's public policy objectives for SGI. But therefore those objectives need to be explicitly defined beforehand.
- A European level observatory should be created to develop a dynamic and public evaluation, starting with the setting-up of a common evaluation methodology and grids enabling comparisons in time and space. Implementation would be realised at the territorial level where objectives, missions and obligations are decided upon. The Observatory and the evaluations should not replace national evaluation and regulation of performance of operators in each sector.
- Given their wide range of expectations, the various stakeholders must be closely associated with the supervision and appraisal of the observatory and the assessments (public authorities, operators, consumers, trade union organisations, civil society, etc.), in a public and transparent process.

- The deficiencies in existing data should be recognised and addressed. A common methodology should be developed to generate standard comparable data, for example, following the LIS (Luxembourg Income Study³³) data system on incomes, the OECD telecommunications outlook, or the energy poverty index. It may be necessary to make access to operators' data compulsory, while at the same time guaranteeing confidentiality.
- Better, harmonised and regularly followed-up indicators are needed in order to measure security, quality and continuity of service provision, with the aim of ensuring similar provisions all over Europe. Indicators of service quality should be oriented towards measures of how well consumer needs are being met. This may require indicators that cover more than one service, for example trains and buses.
- There is a need for more regional data to enable cross-regional comparisons, and more subregional data, specifically to enable comparisons between rural areas and cities. It is indeed important to obtain data to know about “real” accessibility, “real” provision of services and “effective” network capacities (e.g. the real coverage rate of mobile phone throughout all the territory).
- Data collection should address the problems of lack of transparency and secrecy resulting from increasing commercialisation. More data is now considered as confidential, essentially for commercial reasons. Data such as fares (notably in air transportation) should be made available to evaluators. Technology could become a solution for data collection in real time and situations e.g. through electronic ticketing processes.

³³This is a publicly-supported (by some 30 Governments) university and research initiative to collect, harmonise and centralise manifold confidential data resulting from surveys and other official sources on various economic indicators, enabling their free use by researchers and universities of the supporting countries. However, the data never leaves the LIS and the running of the economic and econometric programmes is done within the LIS according to specific procedures, preventing the outcome of data which would not respect the privacy or confidentiality criteria.