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COMMUNICATION FROM THE COMMISSION

TO THE COUNCIL, THE EUROPEAN PARLIAMENT,
THE ECONOMIC AND SOCIAL COMMITTEE
AND THE COMMITTEE OF THE REGIONS

**FIRST MONITORING REPORT ON UNIVERSAL SERVICE IN
TELECOMMUNICATIONS IN THE EUROPEAN UNION**

SUMMARY

*first monitoring report on
universal service*

This Communication is the first monitoring report on universal service in the telecommunications sector and coincides with the launch of full telecommunications liberalisation across the European Union. It follows on from the first systematic survey of telecommunications service indicators in the European Union which was published in March 1996 and responds to the call of the European Parliament for the Commission to report on a regular basis on universal service in the European Union. The 1996 Communication surveyed a range of telecommunications indicators including the development of mobile services. This report also examines for the first time the private and public use of Internet (given the rapid developments in this area) drawing on information provided by National Regulatory Authorities.

*Competition in
telecommunications...
...direct impact on growth,
job, competitiveness*

The approach followed in the European Union in the run up to full competition shows that it has been possible to open up the telecommunications sector in a way which has a direct impact on growth, job creation and competitiveness in the whole of the economy, whilst at the same time securing and advancing the interests of citizens in every part of the Union. This is the underlying message from the improving level of universal service which is described in this Communication.

*ongoing improvement in
service levels, price and
quality*

The report confirms the gradual but continuing improvement in service levels, price and quality which marked the 1996 report. The number of households without telephone service has continued to decline and so too has the gap in telephone line penetration between Member States (see figure 1). Demand for second telephone lines and traffic on existing lines has grown as the Internet phenomenon has accelerated. There has also been significant growth in purchases of PCs for residential use.

*More attention to the
needs of disadvantaged
consumers*

At the same time that use of Internet and mobile communications is growing strongly, National Regulatory Authorities are devoting more attention to the needs of lower income and disadvantaged consumers. More steps are now being taken to ensure that customers can obtain service, choose tariff packages, control their expenditures and pay their bills in ways that are more tailored to their particular needs.

*...still insufficient
measures to identify the
"un-telephoned"*

However, the lack of monitoring information (for example on households without telephone service) indicates that some Member States are still not taking sufficient measures to identify the "un-telephoned" and the reasons why they do not subscribe to services. There are still an estimated 6 million households in the European Union without telephone service. The Commission will seek, in conjunction with Member States and National Regulatory Authorities, to improve the availability of the information that is required to effectively monitor telecommunications developments.

*monitoring information
must improve*

*Consumers are
generally better off in
real terms*

With respect to tariffs and affordability, most consumers are better off in real terms, although this is not always the case for lower usage subscribers, (because the proportion of fixed charges has remained stable or risen, in response to greater cost orientation of prices) or where price-cap regulation has been less stringent (see figure 2 for 1997 user baskets). However, there is an increasing tendency to provide special "low user" schemes in order to spread consumer benefits.

Generally, Member States have relied on detailed retail price regulation or price-cap mechanisms to pass on benefits to consumers. However, in some

Member States price regulation is being withdrawn or rolled back as more effective competition and choice develops. In that way, regulation can focus on customers or services where it is needed most.

European Union legislation safeguards universal service and improves consumer rights

In establishing a framework for full telecommunications liberalisation from 1998 onwards, the European Union has established measures both to safeguard universal service and at the same time to improve consumer rights. European Union legislation provides for action by National Regulatory Authorities if service quality is insufficient, and allows the sharing of uneconomic costs of universal service obligations (subject to competition rules) between designated and other public operators and service providers. **In practice, the majority of Member States have not seen the need at this stage to establish specific schemes for the sharing of any costs related to universal service obligations.**

Shift in balance of tariffs will ultimately support information society developments

The longer term shift in the balance of tariffs from usage to fixed charges (and away from historical price distortions) will ultimately support information society developments. Lower usage charges and trends to flat rate charging help to stimulate demand for information services. Re-balancing between fixed and usage charges also allows more efficient competition for access so that users can ultimately benefit from choice between different technological means of delivering information services.

At this stage no need to redefine the legislation..

At this early stage in the development of full telecommunications liberalisation across the European Union, the Commission believes that it is premature to consider any changes to the legislation underpinning universal service. The effective implementation of the regulatory framework (competitive telecommunications provision combined with regulatory safeguards for consumers) will enhance customer service and lead to more choice and lower prices.

...but monitoring must continue

At the same time, the benefits of competition and choice should extend to all citizens. The Commission intends therefore to continue to monitor developments throughout the Union.

Request National Regulatory Authorities to encourage all operators to offer special Internet tariffs for schools...

On the important matter of efficient Internet access for schools identified in this report, the **Commission will request National Regulatory Authorities to encourage new operators to offer special tariffs to schools** (as soon as competition emerges and without requiring them to provide nation-wide service) and take the necessary steps to encourage and permit incumbent or dominant operators to offer special tariffs to schools. This will involve clearly defining the special category of 'schools', assessing schools' needs in collaboration with **educational and training institutions**, indicating the limits of permissible pricing and dealing where necessary with say interconnection arrangements so that annualised flat rate tariffs can be provided. However, where special tariffs are provided, they should not serve to distort competition, and in particular, National Regulatory Authorities should ensure, when approving such tariffs, that operators do not abuse their dominant position, for example through predatory pricing.

...subject to competition rules

Important that all National Regulatory Authorities obtain and publish accurate and up to date information concerning the situation for users

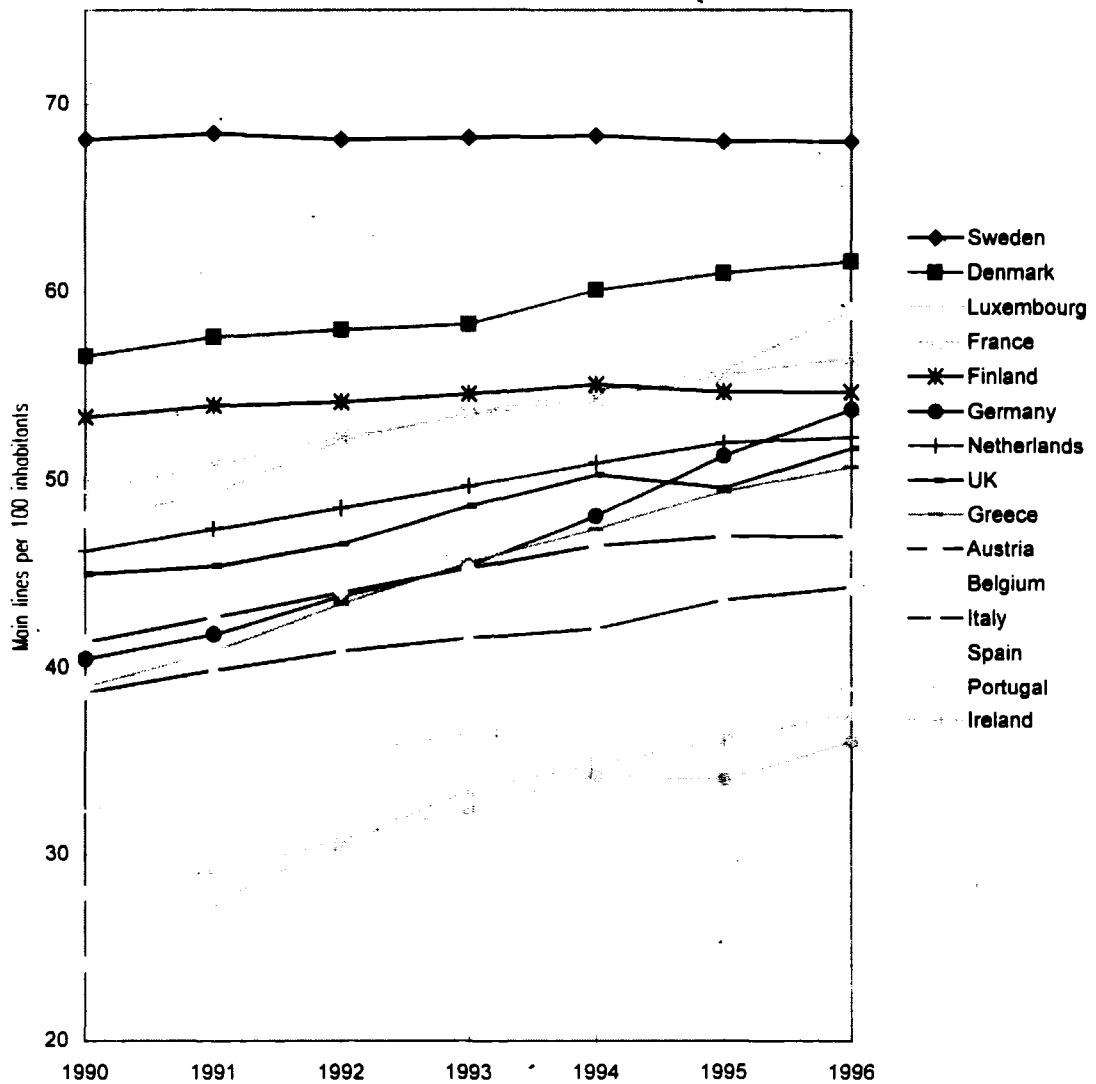
The Commission considers it important that the situation in Member States can be assessed and compared across the Community on an on-going basis. With this in mind, it is important that **all National Regulatory Authorities obtain and publish accurate and up to date information concerning the situation for telecommunications users**. Such information should cover areas of concern such as households without telephone service, the situation of low income or disabled users, the state of affairs at a regional level and in the context of the growing use of Internet, the situation for schools, hospitals and libraries. This information should

*re-examination of
universal service in the
1999 Review*

be supplied to the Commission on a regular basis.

In addition, the Commission will re-examine universal service in the European Union in the context of the review of European Union telecommunications legislation, to be undertaken by the end of 1999. In preparation for this review, which will be subject to public consultation, the Commission will do its utmost to fill the current gaps in monitoring information which exist.

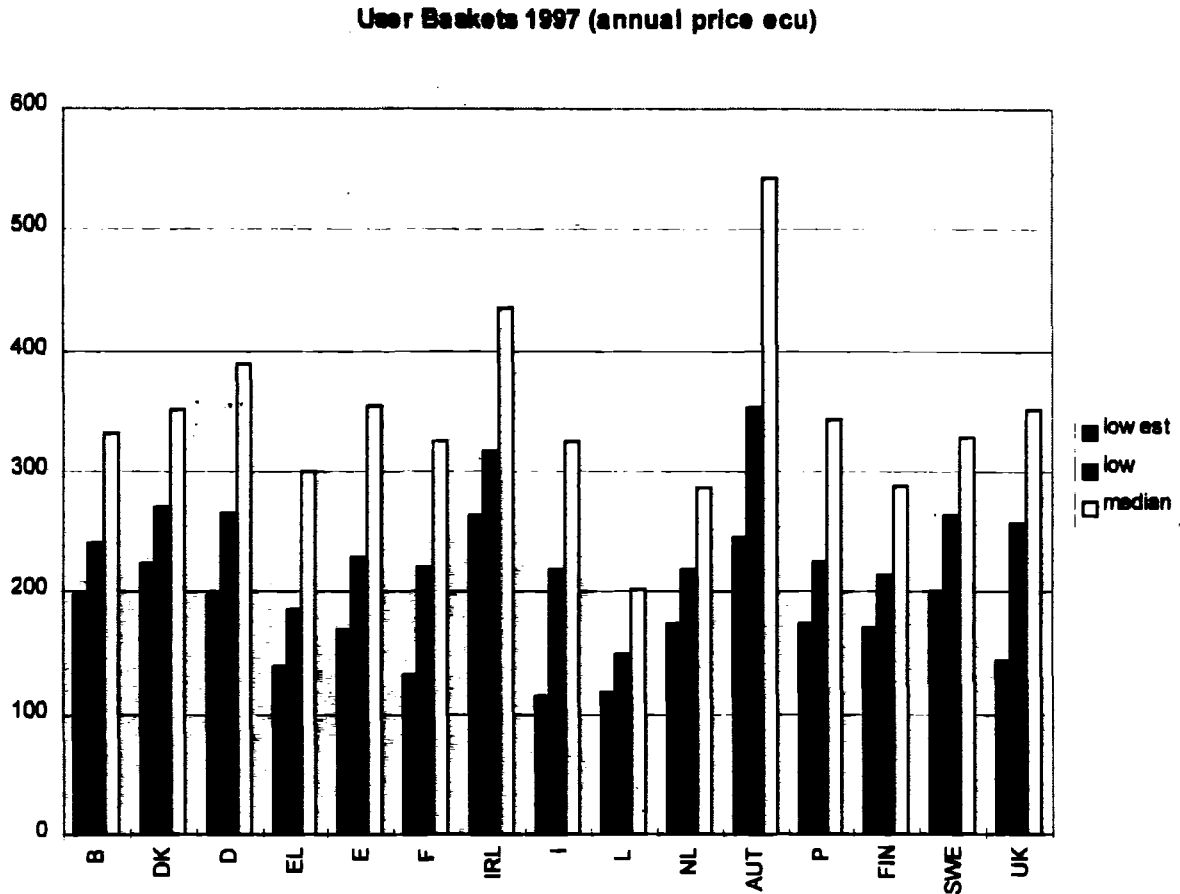
**Figure 1. Penetration Rate of Main Telephone Lines
In the 15 EU Member States**



Sources: Commission Studies 1990-94, National Regulatory Authorities 1995-96.

Figure 2: Low and Median User Baskets in 1997 (ecu)

(Source: Tariff baskets Eurodata Foundation converted to ecu - see graphs in Annex II)¹



¹ The figures for different Member States in the above table should be compared with caution. The same three user baskets were used for all 15 Member States, even though usage patterns differ across regions and between countries. No adjustment has been made for purchasing power parity, or for the fact that exchange rates at any point in time can be above or below long-run trend. The figures include VAT, which differs between Member States. The figures also include a contribution to non-recurring installation charges, and for those countries in which these charges exist, call set-up. These baskets represent consumption patterns for low and median users and consequently contain a very small proportion of international calls (4% or less) and a large proportion of local and national calls. However, the relative size of local calling areas varies dramatically between countries (as does country size) but as the user baskets are the same for all Member States, no account is taken of these differences. Moreover tariff imbalances involving, access (line rental), local, long distance, and international calling, exist in many Member States and the differences in these imbalances may be quite pronounced. Such imbalances can result in business revenues being used to subsidise households. Operators in Member States also make different rates of return on capital.

Note also that these user baskets do not take account of any special discounts that may be available, although the lowest user baskets for France, Italy, Netherlands, Sweden and the UK include the impact of low user schemes - see Annex II for details of low user tariffs.

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I INTRODUCTION

Access to an affordable telecommunications service remains of fundamental importance to every citizen in the European Union. Universal service² in the telecommunications area constitutes a very concrete example of the importance attached in Europe to services of general interest and the role that they play in the European vision of society³.

The approach followed in the European Union in the run up to **full competition** shows that it has been possible to open up the **telecommunications sector** in a way which has a direct impact on **growth, job creation and competitiveness in the whole of the economy**, whilst at the same time securing and advancing the interests of citizens in every part of the Union. This is the underlying message from the improving level of universal service which is described in this Communication.

The full liberalisation of telecommunications throughout the EU is having a major impact on improving the responsiveness of telephone companies to their customers' needs. It is leading to a wider choice of services and pricing packages. It is also gradually leading to a situation where services across the board are delivered at efficient cost levels, which is of major importance to all users and to the European economy.

This Communication is the first monitoring report on universal service in the telecommunications sector and coincides with the launch of full telecommunications liberalisation across the European Union. This report follows on from the first systematic survey of telecommunications service indicators in the European Union which was published in March 1996 and responds to the call of the European Parliament for the Commission to report on a regular basis of universal service in the European Union⁴. It also examines for the first time the private and public use of Internet drawing on information provided by National Regulatory Authorities. The issue of developing regulatory solutions for public access to Internet by schools is also briefly considered.

European Union policy in this area remains multi-faceted. It guarantees and extends to all the basic telephone service and will encourage improvements in price, quality and service, whilst ensuring the development of fair and effective competition. The aim of more effective competition is not only to improve current service levels and increase choice, but to stimulate innovation and develop new services which respond to user needs. These aims are complementary. In that sense the guarantee of universal service is a means of extending market benefits to all and not something to inhibit the development of effective competition or to replace market mechanisms for innovation.

At the same time, accessing telecommunications services is no longer dependent on a single fixed wire-line link into the home or business premises. In some Member States, wireless connections are now being used as an alternative way of providing a fixed telephone line, whilst in others, services are being delivered by the cable television operator, or by a satellite connection. Work is already underway on the next generation of mobile systems which will improve substantially the use of wireless links for e-mail, accessing Internet and other data and multimedia services.

² Universal service is defined in Community legislation as "a defined minimum set of services of specified quality which is available to all users independent of their geographical location and, in the light of specific national conditions, at an affordable price".

³ Communication on Services of General Interest. COM(96) 443

⁴ Beres Report on Universal Service for telecommunications in the perspective of a fully liberalised environment, 21 November 1996. PE 218.932

Against this picture of greater choice and exciting possibilities, the guarantee of universal service has been a cornerstone of the regulatory framework opening telecommunications markets to full competition around the globe.

Within the European Union, provisions relative to universal service today provide a legal guarantee that all users wherever they live can access a defined basic level of service at an affordable price. These provisions set the starting point for competition-driven improvements in service quality and price.

Universal service is recognised to be a dynamic and evolving concept⁵. Its scope may change in response to users' needs, social and economic priorities and improvements in technology. **The delivery of universal service should therefore be monitored in order both to ensure that users receive the service they are entitled to today and to assess the need for changes in its scope for the future.**

With regard to its possible evolution, particularly in the context of the information society, a well defined concept of universal service protects against the risk that market forces on their own might exclude certain groups of users or users in certain regions from being able to access new services. However, in the case where the market is clearly delivering services of determined quality at an affordable price, specific rules may not be necessary.

Section II of the Communication describes the regulatory situation with respect to telecommunications and universal service. Section III presents basic indicators concerning the scope, level and quality of universal service. It also assesses developments with regard to prices and affordability for telecommunications service. Section IV surveys the estimates of the cost of universal service in the Member States and the approaches taken to ensuring that the service is adequately funded in a competitive environment. Section V raises a number of policy issues resulting from the survey and section VI draws conclusions.

In presenting this information, the Communication draws on responses to a questionnaire sent to Member States in the second half of 1997 as well as the Commission's own analysis and comparisons with the earlier survey which formed part of the Communication of 13 March 1996⁶.

II THE CURRENT REGULATORY SITUATION WITH RESPECT TO TELECOMMUNICATIONS SERVICES

1. Current Scope of Universal Service in the European Union

The current scope of universal service obligations has been determined at Community level in Directive 97/33/EC ("the Interconnection Directive"). This directive establishes the maximum set of services whose cost, where it represents an unfair burden on the operator(s) concerned, can be shared with other market players in accordance with the framework established at a Community level.

⁵ In its Communication on Services of General Interest, COM(96) 443, it was recognised that (paragraph 29) "universal service is a flexible concept, which evolves gradually in line with specific structural and technical features and sector-specific requirements."

⁶ Communication of 13 March 1996 on Universal Service for telecommunications in the perspective of a fully liberalised environment, COM(96) 73.

Member States remain free to impose other obligations on telecommunications companies and finance it in conformity to Community law⁷, but where they do so, other market players can not be required to contribute to the resulting costs.

The services identified at a Community level are : connection to the public telephone network - at a fixed location - for telephone, fax and data communications, as well as the provision of operator assistance, emergency and directory enquiry services (including the provision of subscriber directories), public pay-phones and, where appropriate, special facilities for customers with disabilities or special needs.

In addition to the definition of the scope of universal service for funding purposes within the Interconnection Directive, a detailed picture of the level of service a user should receive is provided by the voice telephony directive. That directive, originally adopted in 1995, has recently been revised to prepare for full liberalisation and the final text of those changes was agreed between the Council and European Parliament in December 1997. One of the most important elements introduced by the Voice Telephony directive is the requirement for Member States to ensure that universal service is provided at an affordable price.

2. Fair and Effective Telecommunications Competition

Consensus on the guaranteed level of universal service across the European Community is playing a major role in ensuring that market conditions are similar in the different Member States. Whilst the costs of providing those obligations vary from country to country, the fact that the same set of services in every Member State constitutes the basic universal service ensures that any properly established compensation schemes do not therefore act as a barrier within the internal market⁸.

As indicated above, the Community framework provides a mechanism for sharing the net costs associated with the provision of universal service obligations with certain other market players, if such costs are considered by the National Regulatory Authority to constitute an unfair burden⁹. Such financing may be either through a universal service fund at a national level or through a system of direct payments between the universal service provider and other operators who connect their network to the universal service provider. Section IV presents an overview of national approaches to universal service funding. It is worth noting that 9 out of 15 Member States have not created or do not intend to create an active universal service fund at this stage.

Finally, the Community framework does not assume there will be a single universal service provider in a Member State. Indeed, the Commission believes that other operators should be encouraged to take on obligations relating to universal service.

⁷ See paragraph 30 of COM(96) 443. "Services of General Interest in Europe".

⁸ Mere differences in universal service costs do not in themselves constitute barriers within the internal market. However, excessive levels of costs from universal service obligations in a Member State - relative to total turnover in the market for voice telephony - may well constitute a barrier to new market entrants, as may methods of cost estimation or funding mechanisms which favour the incumbent operator or provide inadequate incentives for the incumbent to improve efficiency.

⁹ Article 5 of the Interconnection Directive. For further interpretation of how universal service costs may be identified and the mechanisms for their financing, see Communication on Assessment Criteria for National Schemes for the Costing and Financing of Universal Service in Telecommunications and Guidelines for the Member States on the Operation of Such Schemes, COM(96) 608, 27 November 1996.

III MONITORING THE SITUATION WITH RESPECT TO TELECOMMUNICATIONS SERVICES

1. Numbers of households with a telephone and other quantitative and qualitative indicators of telecommunications services

Looking at the developments in main lines per 100 inhabitants across the Community (see Figure 1), growth continues steadily in nearly all Member States. Sweden with 68 lines per 100 inhabitants, (a level which was already reached in 1990) has the highest penetration level in the EU and is the only country where penetration exceeds that of the U.S.A.. At the other end of the scale, penetration rates in Ireland, Portugal and Spain for 1996 are 36.0, 37.5 and 38.9 main lines per 100 inhabitants respectively¹⁰ (see Tables 1 and 2 of Annex I). The largest proportional increases in the number of main telephone lines have been in Portugal, Spain and Ireland which covers many of the less developed regions of the Community.

Gradual but continuing improvement in number of homes with telephone service

The results of the survey indicate that there has been a gradual, but continuing improvement in the number of homes enjoying telephone service since 1995. Improvements have been greatest in those countries which still had the most to do, with penetration in Portugal and Ireland improving between 1994 and 1997 from 74.8 to 89.7 % for Portugal, and from 71.0 to 78.0 % for Ireland (Tables 1 and 2, Annex I).¹¹

However, one point of concern is that in a number of countries (Belgium, Denmark, Greece, Luxembourg, Austria, Finland and Sweden), up to date data for this key indicator of universal service is unavailable¹². This lack of basic data was identified in the 1996 Communication on universal service and means that there has been no substantial improvement in the Member States' monitoring of this aspect of universal service since then. In this respect and with regard to other missing or inadequate data which it has not been possible to obtain at this stage, the Commission will do its utmost to collect more precise information for the beginning of 1999 in readiness for the Review¹³.

A further issue is that despite real progress, the proportion of households with telephone service has not yet passed 90% in Germany, Spain, Ireland, Italy and Portugal.

Other developments within the fixed network can be highlighted, illustrating the increasing impact of new services and the Internet, as well as operators' responses to these trends in terms of prices which encourage this development. There has been a marked growth in the number of households with two or more phone lines¹⁴. This points to at least some of those lines being

¹⁰ The number "main lines per 100 inhabitants" is a poor indicator of universal service as it is inversely correlated to average household size, which varies considerably within the Community.

¹¹ Statistical data on "residential main lines per 100 households" should be treated with caution, as there are an increasing number of households with more than one telephone line. This phenomenon can lead to an overestimation of the "real" penetration rate.

¹² In addition, the figure for Portugal appears to be based on historical household data.

¹³ The March 1996 Communication on Universal Service, COM(96)73 indicated that the first Monitoring Report would consider a number of indicators; for some of these (e.g. level of penetration of tele-working, percentage of hospitals with access to on-line information services, issues associated with less favoured and less populated regions) it has not been possible to collect data at this stage. The Member States will be requested to provide information to the Commission.

¹⁴ A measure of the number of households with more than one phone line would be the difference between the number of residential main lines per hundred households and the percentage of households connected to the fixed network if there were no shared lines.

used to connect up a computer or a fax. In addition, some cable operators are now offering Internet access, and a number of operators are undertaking XDSL trials in order to upgrade access speeds.

Improvements in penetration have generally been accompanied by improvements in the quality of service offered over the public fixed network.

The survey shows a mixed picture with regard to improvements in the time taken to get a telephone line and to make repairs when faults occur (Tables 3 and 4).

It is in particular encouraging that the long-waiting times which existed in Austria and Greece have largely been eliminated since 1995. Also all Member States now set targets for at least their incumbent operator and these targets for many countries have been raised since the time of the last survey.

With regard to "repair time target" all Member States have either introduced "repair time targets" or have improved the existing targets since 1995.

Improvements also seen in numbers of public pay-phones

Even though the availability of public pay-phones is becoming less important as a substitute for a telephone in the home as both household penetration of fixed telephone service rises and mobile services grow, the survey shows an improvement in the availability of pay-phones in 6 Member States (EL, E, IRL, L, NL, P, UK, Table 2).

Table 5 shows that the percentage of public pay-phones in working order increased in L, IRL and NL, remained about the same in DK and A and declined substantially in Sweden and slightly in Portugal and the UK. For the remaining countries, no information is available.

Spectacular growth in mobile service continues, but marked regional variations

Growth in mobile communications has continued at a spectacular pace. Today, there are more than **45 million** mobile users in Europe, more than 30 million of whom are using digital mobile systems. A third (and sometimes fourth) mobile-system, exploiting frequencies in the 1800 MHz range, is competing with two (900 MHz GSM) operators in at least 5 Member States and licensing procedures for DCS 1800 operators are underway in most other Member States. In some Member States, the number of new mobile subscriptions each year now outpaces the number of new fixed connections¹⁵.

The overall level of penetration is highest in Scandinavia (Denmark 24.9%, Sweden 28% and Finland 29.3%, Table 2). The remaining marked variations between Member States (the lowest is France with 4.2%) are being reduced due to rapid growth in the countries with the lowest penetration rates.

¹⁵ In order to support the development of third generation mobile communications, the Commission has adopted on 11th February 1998 a proposal for a Decision on the Co-ordinated introduction of mobile and wireless communications (Universal Mobile Telecommunications System - UMTS)

The development of Internet and other advanced services

Recent growth rates in the use of advanced services and Internet in Europe have been dramatic and even exceeded the substantial growth in mobile communications. However, growth is from a low base and there is still a long way to go. In addition, the Commission is concerned about the significant differences in Internet development between countries in the Community. These service areas are not covered by universal service provisions, although the definition of the basic telephone service ensures that consumers can obtain dial-up full Internet services by subscribing to one of a range of services offered by telecommunications operators or competing Internet Service Providers. The current range and development of access to and use of advanced services as well as the existing and potential barriers to greater use are treated in more detail in Annex III of this Communication.

2. The Evolution of Prices of the Basic Telephone Service

Monitoring developments of real prices and affordability

This section reports on independent estimates of the evolution of tariffs for specific user groups which are detailed in Annex II. The real price for telephone service paid for by a subscriber depends on the actual telephone usage pattern and the associated tariffs for calls at the local, regional, national and international level, together with recurring fixed rental charges and the one-off charge for installation¹⁶ of the telephone line. Monitoring prices and affordability of basic services in voice telephony should therefore include all these cost elements.

In Annex II the results¹⁷ of monitoring developments in prices and affordability of universal service in voice telephony are shown for each of the fifteen Member States. The graphs in the Annex show the evolution of real prices¹⁸ from 1990 to mid 1997 for three types of residential user.¹⁹ Figure 2 gives the values of the three user baskets for 1997 in ecu.

The pricing of voice telephony services across the 15 EU Member States varies, as the re-balancing process of tariffs is at differing stages. The competitive environment and cost of living also varies, and this too is reflected in the actual prices charged.

Competitive pressure to date has mostly been on international call charges. Tariff reduction and re-balancing have been occurring under regulatory as well as competitive pressures. The significant trend is a continuing decrease in usage tariffs which is partially offset by increases in fixed charges, in particular monthly rental tariffs. **Table 8 indicates that the major decreases in tariffs during the period 1995-1997 have occurred for international and long distance service. The highest (real) price decreases for local service for the period occurred in Finland and the UK.**

¹⁶ An annual depreciation value of the one-off installation charge should be included in the cost calculation of having a telephone, to realistically represent the overall cost of telephone usage.

¹⁷ "Monitoring Developments in Pricing and Affordability of Universal Service in Voice Telephony within the European Union", an independent study by Eurodata Foundation for the Commission.

¹⁸ Real prices are nominal prices corrected for inflation by using an index representing increases in consumer prices with respect to a base year. The study uses 1990 as the base year and indexes are listed in Annex II.

¹⁹ The 3 baskets reflect usage patterns of 3 different types of consumer: the Average or median user ("The 50% user" whose spending represents median usage), the Low Usage user ("The 25% user" whose spending represents the first quartile of usage), and the Lowest user ("The 10% user" whose spending represents the lowest decile user). These 3 baskets or user profiles have been defined in order to see variations in price developments for different types of usage, in particular for those consumers that are less well-off. They also examine the effects of specific low user schemes that are offered. The baskets cover fixed charges as well as representative levels of domestic and international calls.

General developments in total real costs for basic telephone service²⁰

The significant indicator of how tariff changes affect consumers consists of price trends which are adjusted to take account of inflation.

In most Member States the trend is that the "50% (median) user" has experienced a decrease in real total costs. However in the Netherlands and Sweden, where absolute price levels were already low relative to other Member States, total costs have slightly increased in the last 3-4 years.

The picture for developments in real total costs for the "lower 25% user" and the "lowest 10% user" on the basis of standard tariffs are somewhat mixed. In Austria, Denmark, Finland, Greece, Ireland, Spain and the UK real total costs have fallen. In contrast, in France and Sweden real total costs under standard tariffs have gone up whilst in the remaining countries real tariffs for these consumer groups have remained relatively stable or have risen slightly for the lowest user group during the most recent period.

Benefits to low users of telephone service from "low user tariff schemes" in some Member States

Operators in several Member States (Austria, France, Italy, the Netherlands, Portugal, Sweden and the UK) now offer systematic special tariff packages for users who make relatively few telephone calls. These schemes are designed to cover the first residential telephone line and to offset any adverse impact on low users caused by the re-balancing of tariffs from usage to fixed charges.

3. Affordability, controlling expenditure and consumer needs: special tariff schemes and other regulatory measures to benefit customers

The process of tariff re-balancing has not limited the growth in telephone penetration. Affordability is not just a matter of prices and their evolution but concerns the ability to monitor and control expenditure and exploit tariff and billing plans that best suit user needs.

The process of tariff adjustment is continuing within the European Union (see Table 7 and 8 of Annex I) as a result of early liberalisation in some countries (UK, Sweden, Finland and Denmark), preparation for full liberalisation from 1 January 1998 in others, and preparation for later liberalisation in Greece, Ireland, Luxembourg, Portugal and Spain²¹.

For those residential consumers and other users who principally make peak rate local calls, any increases in rental or local call charges must be handled carefully, to avoid undesirable impacts on the overall affordability of telephone service. The Commission has already identified concerns about these effects in its March 1996 Communication, whilst Article 3(1) of the Voice Telephony Directive²² specifically promotes the use of price caps or other mechanisms until such time as competition provides effective controls on prices.

²⁰ Developments in total real cost describe how the price of services or consumer bills have evolved with respect to inflation or the underlying change in consumer prices - see footnote 8.

²¹ Additional transition periods have been granted to Luxembourg (July 1998); Spain (December 1998); Ireland and Portugal (January 2000) and Greece (January 2001).

²² Final text agreed December 1997 but not yet formally adopted.

In practice, safeguards are provided in most Member States through the use of price caps²³ which apply to some or all of the universal service providers' tariffs in order to control the speed with which rates are adjusted. Table 9 (Annex I) provides details of price caps which are currently in operation.

Overall 9 Member States report that average telephone charges have fallen in real terms by as much as 5-20% since 1995 (Tables 7 and 8 of Annex I). The largest overall decreases in real tariffs reported are in France, Germany and the UK although reporting periods differ slightly.

However, one point of concern is the fact that 6 Member States are unable to report figures on overall changes in tariffs.

With regard to re-balancing the general and most common trend has been increases in line rentals offset by sharp decreases in long distance and in particular international telephone tariffs, (Table 8, Annex I). The largest decreases in international and long distance charges have been in situations where competition has already been introduced or where price cap regulation permits or forces significant tariff re-structuring.

Re-balancing should now be urgently completed

Whilst acknowledging the progress made, the Commission believes that re-balancing can and should be urgently completed in order to avoid artificially high and systematically distorted prices being maintained in order to subsidise universal service.²⁴

This is important because long distance and international calls are set to fall even more substantially from 1 January 1998 as liberalisation will allow operators to deliver calls within the Community on the basis of cost-based interconnection charges.

Ultimately, the process of re-balancing and re-structuring tariffs will lead to major benefits to all users as usage of services across the Union is stimulated and competition occurs under more efficient conditions. The development and impact of low user schemes demonstrates that the undesirable short term effects of re-balancing can be countered, and that benefits can be extended to all consumers.

Affordability of telecommunications services

The requirement for service to be affordable is a key component of universal service for telecommunications. Eleven Member States now include a legal obligation or licence condition requiring universal service to be provided at an affordable price. This anticipates the legal obligation introduced at a Community level in the amended Voice Telephony Directive²⁵. Nevertheless, the survey shows that very few Member States identify in their legislation or licences how such affordability is measured.

The lack of an indication at a national level of how affordability is measured may give rise to problems, for example, if users wish to challenge prices or service levels provided under universal service. On the other hand, it may be that affordability should be seen as ensuring

²³ Greece, Luxembourg and Finland do not currently report usage or the introduction of price-cap regulation of consumer prices for voice telephony.

²⁴ For many Member States, the re-balancing process has been completed. An analysis has been undertaken in the Commission's third report on the implementation of the telecommunications regulatory package, COM(98).

²⁵ Directive 97/1/EC on the application of open network provision (ONP) to voice telephony and on universal service for telecommunications in a competitive environment.

that prices do not stop people joining the network or cause them to leave the network. If that is the case, it may be that a precise definition is not needed. It may be enough to monitor overall penetration rates, as well as the rate and pattern of customer dis-connections and re-connections to assess the general level of customer satisfaction.

A greater range of social and other tariffs and methods of payment is now available

Affordability is not just concerned with the prices paid. It also relates to the possibility to choose between tariff packages with different mixes of fixed and variable usage charges. It is also about how and when payments can be made and the ability of customers to monitor and control their expenditure (e.g. connection charges paid via instalments; monthly as opposed to bi-monthly or quarterly billing; customer deposits replaced by set credit limits; the availability of call-barring to block access to premium rate or higher priced services, the availability of itemised billing or expenditure).

Table 10 in Annex I identifies which Member States have now put in place specific low user schemes to make telephone service more affordable and more accessible to all users.
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Special measures to help consumers control expenditure on voice telephony service

Arrangements to help consumers control their telephone service expenditures may include facilities such as: (i) itemised billing (ii) general or selective outgoing call barring to basic or premium services (iii) pre-determined ceiling of amount spent on telephone service or (iv) pre-payments of bills.
--

Very few Member States have reported (table 12A in Annex I) that special measures other than itemised billing are available. Schemes for pre-payment of bills are available or planned for in France, Luxembourg and the UK. Finland offers its customers the choice of a lower connection fee together with a higher recurring rental fees. Spain offers a scheme whereby 50% of the connection fee for the initial connection can be paid in three equal parts over the first three telephone bills.

However, the UK seems at the moment to be the only Member State to offer or plan to offer a very broad range of measures for consumers to control their expenditures on voice telephony. In addition in the UK, a so called "Residential Limited Service Scheme" is available, which allows households to subscribe to telephone service at a very low price on the basis that they can only receive calls or make outgoing calls to emergency services, customer services and fault repair services.

Some National Regulatory Authorities in Member States are now publishing information on "dis-connections" and "re-connections" of consumers, following concerns about "disconnections" of customers in respect of non-payment of bills

"Disconnections" result from three principal causes (1) change of address of a subscriber (2) problems with bills, or (3) the decision of a subscriber to obtain service via another network. The third reason depends on the extent to which alternative local competition is available.

Greater flexibility on "disconnections" is already a feature of the amended Voice Telephony Directive which provides for Member States to authorise measures ensuring that except in the case of fraud or persistent late or non-payment of bills, users are offered soft "disconnection" (i.e. they can continue to make or receive non-chargeable calls for a specified period). According to responses, "soft disconnection" is available in four Member States, (B, F, I and the UK).

Consumers are being given a stronger role in decisions concerning the services they receive

All Member States, except Greece²⁶, Ireland, Italy, Luxembourg and Austria (see Table 6 in Annex I) have put in place specific mechanisms to involve consumers and groups representing the interests of particular groups of users, such as those with disabilities, in decisions relating to telecommunications services. This is often in addition to more general consultation mechanisms allowing public comment on key regulatory issues.

Mechanisms now exist for handling consumer complaints in All Member States

Specific mechanisms now exist for handling consumer complaints in all Member States. In most cases, the main role is placed on the operator concerned, but with the national regulatory authority playing a specific role in the case that complaints are not resolved, or as part of its general role of market supervision. Table 6A provides details of procedures and table 6B provides a list of names and addresses of national complaint bodies.

It is worth noting that in some Member States there is an appeals mechanism against the decisions of the complaints body, though often via normal administrative law procedures. In most Member States decisions relating to consumers are only publicised to interested parties on their request or in the annual report of the relevant authority. For normal complaints the procedures are free of charge in all Member States²⁷.

Users are becoming more vocal

Most Member States now collect statistics on the numbers of complaints that they handle²⁸. Despite improvements in service quality, the overall number of complaints is generally rising (except in UK), probably reflecting greater awareness of existing procedures in the run up to liberalisation.

IV THE COST OF UNIVERSAL SERVICE AND NATIONAL APPROACHES TO FUNDING UNIVERSAL SERVICE

Community law provides a detailed framework²⁹ for identifying the cost of universal service obligations and for ensuring that they can be adequately financed once markets are open to competition. In order to develop best practice in this area, the Commission in November 1996 also published a Communication on costing and financing of universal service³⁰.

²⁶ Greece has planned for a mechanism for consumer representation in its legislation, but has not yet implemented this.

²⁷ Austria has not reported whether a charge or a fee on consumer complaints is levied.

²⁸ Italy, Luxembourg, Portugal and Sweden did not provide complaints figures to the Commission questionnaire of September 1997.

²⁹ Commission Directive 96/19/EEC with regard to the implementation of full competition in telecommunications markets, OJ L74, 22.3.96 and Directive 97/33/EC of the European Parliament and of the Council on interconnection in telecommunications with regard to ensuring universal service and interoperability through the application of the principles of open network provision (ONP), OJ L 199/32, 26.7.97.

³⁰ Communication of 27 November 1996 on assessment criteria for national schemes for the costing and financing of universal service in telecommunications and guidelines for the Member States on the operation of such schemes, COM(96) 608

Three features of the framework should be highlighted. Firstly, only those costs associated with the provision of universal service obligations as defined at a Community level may be included in any calculation, and, it is only contributions to the 'net' cost of those obligations which may be recoverable. Any calculation must be open to verification by the national regulatory authority. Secondly, it is for Member States to assess on the basis of the net

In implementing national frameworks for 1998, costing exercises have been carried out in most Member States and the issue of financing has been addressed.

Uncertainty over the estimated cost of universal service for many Member States

Table 14 indicates that four Member States have provided estimates of the net cost of universal service. In the UK, the national regulatory authority has established an independent estimate of net cost equivalent to 0.8 - 1.6% of BT's turnover. The other estimates, with respect to the incumbent's turnover are Spain (2.1% - 3.7%), France (5.5%) and the Netherlands (5.5%).

Whilst acknowledging the possibility for differences in the net cost of universal service obligations, the Commission is concerned by the divergences in estimations particularly where no independent estimations have been undertaken.

9 out of 15 Member States do not find that specific funding for universal service is required at the moment of opening their markets to full competition

The Commission notes with interest that 9 Member States (Austria, Belgium, Denmark, Finland, Germany, Luxembourg, the Netherlands, Sweden, and the UK) have decided at this stage that their national markets can be opened to competition without the need for universal service costs to be shared with other market players. In some cases, Member States have taken the view that the costs involved are not an unfair burden for the operator(s) and in others, that they do not justify the costs of administering a fund. In the case of Austria, Belgium, Germany and Luxembourg, provisions are in place for the activation of a national universal service fund in the event that substantial costs materialise.

The remaining Member States (with the exception of Greece whose legislation is not yet at an advanced stage), have chosen to use a national universal service fund.³¹ In the case of derogation countries, such measures may only be invoked when full liberalisation is implemented.

Schemes for the recovery of access deficits have also been put in place by some Member States, although such charges are not part of universal service costs. For example in France, an additional charge has been introduced on a temporary basis in order to recover the so-called "access deficit"³². This is the revenue "lost" to the incumbent operator due to regulatory restrictions on its ability to re-balance its tariffs. It is important that an access deficit be determined according to an economic assessment of the value of access infrastructure.

Certain forms of telecommunications related subsidies cannot be included in the USO fund, but may be paid for via the State budget

Any obligations which lie outside the scope of universal service as laid down in Community law, such as the provision of special terminal equipment for users with disabilities, can not be

cost calculation whether the costs involved represent an unfair burden for the organisation concerned. It is only where they do so, that mechanisms may be used to share those costs amongst market players. Finally, the Community framework allows two mechanisms by which costs might be recovered, other than through direct support from the budget of the country concerned. These two mechanisms are either a universal service fund at a national level, or a system of supplementary charges.

³¹ France, however, has also chosen to use a supplementary charging system until the year 2000.

³² The charge will take the form of a supplementary charge to interconnecting operators. Community law already makes clear that such costs are not part of cost of universal service obligations, and where they exist they should be temporary in nature and must be separated from both universal service charges and any interconnection charges.

financed by mandatory contributions from market players, but can be financed by the State. However, the net cost of standard published low user tariff schemes may be financed via universal service funds provided they are correctly and transparently accounted for.

V POLICY ISSUES

1. The Provision of Telecommunications Service

The number of fixed telephone lines has now risen to over 190 million in the European Union and the gap between Member States continues to narrow. In some Member States the growth in fixed line subscribers has moderated, as mobile telephone usage has grown, although this is being off-set by demand for second lines. Mobile subscribers now amount to about 45 million in the European Union and the total is still growing at an annual rate of about 50%.

However, there are still an estimated 6 million households without telephone service, although the fact that a number of Member States do not survey or establish information in this area makes it impossible to give a precise figure. In situations where telephone access is extensive, this lack of information is not unsurprising. However, where telephone access and usage still falls short of near saturation levels, it seems imperative that National Regulatory Authorities in Member States should establish information in this area and monitor the situation.

The Commission welcomes the efforts of National Regulatory Authorities in devoting attention to the specific needs of lower income and disadvantaged consumers in anticipation of the legislative requirements established in the amending Voice Telephony Directive. Greater steps are now being taken in some Member States to ensure that customers can obtain service, choose tariff packages, control their expenditures and pay their bills in ways that are more tailored to their particular needs.

In a few Member States, the designated operator now provides facilities for pre-determining telephone expenditure and in **most Member States it is now possible to bar certain types of (more expensive) telephone calls.** About a third of Member States have now introduced **low user schemes**, permitting residential consumers to have telephone service whilst paying reduced monthly rentals³³. In general the Commission believes that the way to achieve better levels of telephone penetration and usage is a complementary mix of competition and the regulatory safeguards provided for in Community legislation.

National Regulatory Authorities should ensure that they can quantify and monitor where necessary the proportion of households which do not have the basic telephone service. In cases where households are involuntarily not subscribing to service, steps should be taken to develop low user and related affordability schemes in line with Community legislation. However, any such schemes must fully respect competition rules.

2. Affordability and Quality

There are a number of aspects linked to the issue of affordability, including the level and structure of prices and the way they change over time, and the ability of users to monitor and control expenditure including the ability to pre-determine their spending. In addition, properly designed price-cap controls and low user schemes (which do not distort competition) can

³³ It should be mentioned that "low user schemes" combining lower connection and rental charges with higher call charges may be commercially viable (in the sense of generating revenues in excess of the costs concerned) and therefore may not add to the net costs of universal service.

ensure that benefits are passed through to all users even during the re-balancing process which is occurring because of technological changes and the liberalisation process.

The analysis outlined in Annex II on the evolution of tariffs for different types of consumers over the period 1990-97 shows that on the whole, most consumers have been benefiting from real price decreases in telephone service, although this is not always the case for lower usage subscribers (because fixed charges are a high proportion of their expenditure) or where price-cap regulation has been less stringent.

The amended Voice Telephony Directive clarifies that rules and criteria to ensure affordability are published at national level after consultation with consumers and users and in addition the Commission is required to prepare reports on the evolution of tariffs. The Directive also lays down procedures to allow national regulatory authorities to monitor the quality of telephone services and, in consultation with users and consumers, to take corrective action where necessary to improve operators' performance.

The Commission will ensure that the measures concerning affordability, quality of service and consumer protection in the amending Voice Telephony Directive are effectively implemented and will continue to analyse and prepare reports on the evolution of tariffs and the quality of services.

3. The Scope of Universal Service

The launch of full telecommunications competition across the European Union from the beginning of 1998 has meant that legislation has been enacted to guarantee and extend provisions on universal service whilst at the same time ensuring that any national measures taken in support do not distort effective competition. The scope of universal service in the European Union and the financing of any costs emanating from universal service obligations is underpinned by Community legislation, in particular the Voice Telephony Directive and the Interconnection Directive.

In the Commission's Communication on Services of General Interest, it was recognised that "universal service is a flexible concept, which evolves gradually in line with specific structural and technical features and sector-specific requirements." In the telecommunications sector, it is likely to be market forces that determine the development, roll-out and take-up of new services and the technologies on which they are based. The major political objective must be to ensure that the benefits of new services and technologies are spread throughout the European Union. Ensuring effective competition in the telecommunications sector will also be crucial, because competition will be the key driver of improvements in service quality, penetration and prices.

Universal service is a means of spreading the benefits of market developments to all users independent of their location or socio-economic status. The Commission has recognised universal service as an essential element contributing to solidarity and equal treatment. This regulatory approach has been chosen in part to avoid inefficient and distortionary practice by new entrants, but also to ensure that all citizens of the Union have access to certain services of high quality at prices they can afford. However, universal service is not about pushing technologies or determining in advance what services are to be guaranteed across the board. Commercial trends in the telecommunications sector, particularly in the fast growing mobile communications services are away from uniform and mandatory types and standards of service to a wider range of service possibilities and packages which consumers choose for themselves.

At this early stage in the development of full telecommunications liberalisation across the European Union, the Commission, on the basis of the available data, believes it premature to consider any redefinition of the legislation underpinning universal service (including its scope and financing). The Commission will continue its efforts to improve monitoring

data and will re-examine universal service in the context of the Review of telecommunications legislation, to be undertaken by the end of 1999. In any case, the Commission will ensure as soon as possible the effective implementation of the provisions in the amended Voice Telephony Directive, which guarantee affordable service and a number of related provisions and go beyond current levels of service provision in a number of Member States.

4. The working of Universal Service Financing Schemes

No requirement is imposed on Member States to set up national schemes to share any burden amongst market players which may result from the cost of universal service provision. However, where such schemes are implemented they must be compatible with Community law, and in particular with Commission Directive 96/19/EC and with Directive 97/33/EC, the "Interconnection Directive".

The Commission notes that all Member States have examined or are in the process of examining the question of guaranteeing universal service provision in the context of full telecommunications liberalisation across the European Union. A few countries have undertaken very detailed assessments of the possible net costs associated with universal service obligations on the designated operator.

Two Member States, France and Italy, have chosen to establish a national universal service fund from the beginning of 1998, although France will also employ a system of supplementary charges (added to interconnection charges) until the year 2000, which will in addition cover access deficit charges. In the case of France, the Commission notes that the scheme set up also levies charges in respect of the year proceeding liberalisation. In the case of countries with derogations for the commencement of full liberalisation, (Spain, Ireland, Portugal and Greece), universal service fund measures may only become operational once full liberalisation is implemented.

The Commission is concerned that excessive estimations of the net costs of universal service obligations may be made, with the risk that competition is distorted. In general, a universal service financing scheme may be employed to raise the revenues necessary to pay the net universal service obligation (USO) costs, where they represent an unfair burden on the organisations concerned. In this case, non-discrimination requires that the net cost of USOs should be recovered across the broadest base of industry participants which EU law permits. This is identified in the Interconnection Directive as, "all organisations operating public telecommunications networks and/or publicly available voice telephony services".

The Commission will continue to scrutinise any national universal service compensation schemes to ensure that they are compatible with Community law.

5. Advanced Services and Public Access Issues

Market growth and innovation in this area depends on continuing healthy competition between existing operators which are in pole position to deliver such services (and which gain directly by increased traffic levels) and new operators and the specialist Internet Service Providers which depend on incumbent operators for infrastructure and services.

As effective competition develops in the European Union, greater choice in local access as well as long distance facilities is likely to further stimulate growth and development. In some cases, the spur to provide interactive services to residential customers will come from entirely new directions. For example as the transition to digital broadcasting gets under way (underpinned

by European legislation on standards and conditional access), new interactive services are likely to develop in parallel to traditional television services.

While use of advanced services and Internet continues to develop in business and in a residential context across the European Union, questions arise about the development and exploitation of such services in various public contexts. To what extent do governments and public authorities use and promote the new services and possibilities? Will services and facilities be accessible to the general public in libraries or other public fora? Can the new technologies and services be effectively exploited in an educational context?

It is important to emphasise that industry and commerce (as well as telecommunications companies per se) have significant interests in residential consumers as well as business taking up the new services. Internet in particular and interactive television too will be a channel through which other services (banking and financial services, insurance, news and information, retailing, games, software etc.) will also be advertised, sold and provided.

In the extremely important context of education and training, this Communication highlights again the range of issues that are raised of which telecommunications is but part. The other important areas include the provision and modernising of equipment in educational establishments, the important issue of training and support of teaching staff, and the development of educational content and exploitation of educational networks.

Community programmes are already supporting a wide range of initiatives and support mechanisms in the context of the Action Plan on Learning in the Information Society and are continuing to develop.

Public and "community" access may be of particular importance in less favoured regions or for less favoured users, where there may be a risk of delay in accessing advanced services if left to market forces alone. The Commission will continue to monitor developments in this area, as public access may be a means, within a reasonable time scale, of overcoming the difficulties in providing access to many advanced services and sources of information for individuals and for the non-profit and voluntary sectors.

With respect to the more specific telecommunications needs in this area, the Commission makes the following proposal which builds on the survey and analysis of Annex III of this Communication.

The Commission will:

In the context of the implementation of full telecommunications liberalisation, encourage special tariffs for schools for Internet access and usage in particular by publicising and making transparent the different tariffs available in Europe so as to stimulate and spread good practice by the industry. Set up a Web site to provide up to date information on special tariffs that are available in different parts of the Union.

Request National Regulatory Authorities to encourage new operators to offer special tariffs to schools (as soon as competition emerges and without requiring them to provide nationwide service) and take the necessary steps to encourage and permit incumbent or dominant operators to offer special tariffs to schools. This will involve clearly defining the special category of 'schools', assessing schools' needs in collaboration with educational institutions, indicating the limits of permissible pricing and dealing where necessary with say interconnection arrangements so that annualised flat rate tariffs can be provided. However, where special tariffs are provided, they should not serve to distort competition, and in

particular, National Regulatory Authorities should ensure, when approving such tariffs, that operators do not abuse their dominant position, for example through predatory pricing.

Continue to monitor the impact of tariffs on the further take up of Internet access and usage by schools, training institutions and libraries.

VI CONCLUSIONS

This Monitoring Report gives an overview of the situation in the wake of full telecommunications liberalisation of most European Union countries. It confirms the gradual but continuing improvement in service levels, price and quality which marked the 1996 Communication. **The number of households without telephone service has continued to decline and so has the gap in telephone line penetration between Member States.** Demand for second telephone lines and traffic on existing lines has grown as the Internet phenomenon has accelerated.

Moreover, the number of mobile telecommunications users in the European Union continues to grow strongly, particularly where genuine competition between operators has developed - usually in cases where at least three providers have launched services. In a number of Member States, the penetration levels of mobile services, and the price packages available, mean that mobile service already constitutes an alternative for some users to the traditional fixed telephone service and furthermore offers additional service features.

At the same time that use of Internet and mobile communications is growing strongly, National Regulatory Authorities are devoting more attention to the needs of lower income and disadvantaged consumers. More steps are now being taken to ensure that customers can obtain service, choose tariff packages, control their expenditures and pay their bills in ways that are more tailored to their particular needs. However, the lack of monitoring information (for example on households without telephone service) indicates **that some Member States are still not taking sufficient measures to identify the "un-telephoned" and the reasons why they do not subscribe to services.**

With respect to tariffs and affordability, the evidence is that overall price levels have declined since 1990 and most consumers are better off in real terms, despite significant tariff re-balancing in some Member States in recent years, in preparation for liberalisation. In general, average or median users have benefited more than low users, because the proportion of fixed charges has remained stable or risen. However, there is an increasing tendency to provide special "low user" schemes in order to spread consumer benefits.

In establishing a framework for **full telecommunications liberalisation from 1998 onwards, the European Union has established measures to safeguard universal service and increase consumer rights.** European Union legislation guarantees service and quality levels and permits the sharing of uneconomic costs of universal service obligations (subject to competition rules) between designated and other public operators and service providers. In practice, the majority of Member States have not seen the need at this stage to establish specific schemes for the sharing of any costs related to universal service obligations.

In general, telecommunications policy (and regulatory oversight) as it relates to universal service should, over the longer term, be aimed at getting the right balance between establishing effective competition (as a means to greater innovation and choice, and in particular services and prices which respond to customers' needs) and extending benefits to all customers. Any measures taken to deal with particular needs of specific consumers should not serve to distort competition and its development.

The benefits of competition and choice should extend to all citizens irrespective of income and location. The Commission intends therefore to continue its efforts to improve the monitoring of developments throughout the European Union, including the implementation of the range of consumer protection measures included in the amending Voice Telephony Directive. In addition, the Commission will re-examine universal service in the European Union in the context of the review of European Union telecommunications legislation, to be undertaken by the end of 1999.

In the context of monitoring developments, the Commission will focus on areas which appear to be of the greatest concern including households without telephone service, affordability and related consumer protection issues, the situation of low income and disabled users, the state of affairs at a regional level and, in the context of the growing use of Internet, the situation for schools, hospitals and libraries.

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ANNEX I

Monitoring Survey of Telecommunications Services in the European Union

Table 1: Telephone Penetration Rates Within the European Union

(Source: National replies to 1997 Commission questionnaire)

Country	Percentage of households with a telephone ¹			Residential Main Lines per 100 households		
	1994	1995	1996	1994	1995	1996
B	n/a	n/a	n/a	92	93.5	95.3
DK ²	n/a	n/a	n/a	106	n/a	n/a
D	89.0	87.1	89.3	93	n/a	n/a
EL	n/a	n/a	n/a	96	n/a	n/a
E	n/a	85.8	87.5	89	93	95
F	96.4	96.2	96.2	111	100.1	100.4
IRL	71.0	74.0	78.0 ³	75	74	78
I	n/a	87.0	87.9	99	90.6	91.4
L	n/a	n/a	n/a	105	112	115
NL	96.5	96.5	96.5	122.9	125.9	123.4
AUT	n/a	n/a	n/a	n/a	n/a	n/a
P ⁴	74.8	86.3	89.7 ⁵	64	67.7	70.6 ⁶
FIN	97.0 ⁷	95.0 ⁸	n/a	104	93 ⁹	92 ¹⁰
SWE	98.7	n/a	n/a	119.6 ¹¹	119.5	119.3
UK	91.1 ¹²	93.0	96.0	99	91.9 ¹³	94.3

¹ In principle, information on the proportion of households with a telephone should be obtained by survey whereas information on the number of residential lines per 100 households may be obtained as a ratio of the two statistics (residential lines and number of households). In any case, the figure for the percentage of households with a telephone may differ from the number of residential lines per 100 households for several reasons, including: single households with multiple telephone lines; multiple households sharing a single telephone line; the possibility that some cellular phone subscriptions are counted in the former but not in the latter, differing definitions of household and also measurement errors from sampling errors and non-responses.

² The official statistics does not separate between residential lines and business lines.

³ 1997: 81%, statistics based on data supplied by Telecom Eireann

⁴ The number of households refers to 1991 for each of 1994, 1995 and 1996

⁵ First semester of 1997: 90.9%

⁶ First semester of 1997: 71.8%

⁷ Estimate

⁸ Includes cellular and fixed phones

⁹ Excludes cellular telephones (some are giving up their fixed lines for mobile phones)

¹⁰ Excludes cellular telephones

¹¹ Telia's number of household subscriptions per 100 households

¹² Data relates to March 1995 (Source: UK Family expenditure survey)

¹³ Residential main lines per 100 households will differ from the percentage of households with a telephone for a number of reasons, including: single households with multiple telephone lines; multiple households sharing a single telephone line; differing definitions of household and measurement errors such as sampling error and non-response bias.

Table 2: Penetration of Fixed and Cellular Subscribers per population

(Source: National replies to 1997 Commission questionnaire)

	Main lines per 100 population			Cellular subscriptions per 100 population			Payphones (coin+card) per 1000 population		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
B	45.0	45.7	46.5	1.2	2.3	4.7	1.5	1.5	1.5
DK ¹⁴	60.0	61.0	61.6	9.7	15.6	24.9	1.6	1.5	1.5
D	48.0	51.3	53.8	3.0	¹⁵ 4.6	¹⁶ 6.9	2.1	2.0	2.0
EL	48.0	49.4	50.7	1.4	n/a	¹⁷ 5.3	3.5	3.9	4.0
E	38.0	38.5	38.9	1.0	2.4	7.6	1.4	1.8	1.9
F	55.0	55.6	¹⁸ 56.5	1.4	2.2	¹⁹ 4.2	3.5	3.4	3.5
IRL	35.0	34.0	²⁰ 36.0	1.7	3.5	7.0	1.8	1.7	²¹ 1.8
I	43.0	43.6	44.3	3.9	n/a	n/a	6.8	6.7	6.7
L	55.0	55.8	59.0	3.2	6.5	11.0	0.9	1.0	1.1
NL	51.0	52.0	52.3	2.0	n/a	9.0	0.7	0.8	0.9
AUT ²²	47.0	47.0	47.0	3.5	²³ 4.8	7.4	4.3	3.8	3.8
P	35.0	36.1	²⁴ 37.5	1.8	3.4	²⁵ 6.6	3.3	3.3	²⁶ 3.5
FIN	55.0	54.7	54.7	13.3	20.4	²⁷ 29.3	4.6	4.9	4.9
SWE	68.0	68.0	68.0	16.0	22.0	²⁸ 28.0	3.7	n/a	n/a
UK	49.0	49.6	51.7	6.1	²⁹ 9.2	11.6	2.1	2.2	2.4
EU Average	48.8	49.5	50.6	4.6	8.1	11.7	2.8	2.8	2.8

¹⁴ Data on Main Lines and Payphones only available from Tele Denmark.

¹⁵ 1995: Analogue: 0.8; Digital: 3.8

¹⁶ 1996: Analogue: 0.7; Digital: 6.2

¹⁷ 03/1997: 5.84

¹⁸ June 1997: 56.7

¹⁹ June 1997: 6.1% (95% digital subscribers)

²⁰ 1997: 37

²¹ 1997: 1.99

²² Main lines without ISDN.

²³ • 1995: Digital: 1.2, Analogue: 3.6; 1996: Digital: 3.8, Analogue: 3.6; 1997: Digital: 6.8, Analogue: 3.4

²⁴ First semester of 1997: 38.0

²⁵ First semester of 1997: 8.9

²⁶ First semester of 1997: 3.6

²⁷ 1997: 33

²⁸ 1997: 33% in October 1997

²⁹ 1995: Digital: 2.4, Analogue: 6.8; 1996: Digital: 5.8; Analogue: 5.7

Table 3: Target Period for Network Connection and Supply Times

(Source: National replies to 1997 Commission questionnaire)

	Information published	Supply time target	Actual supply times
B	Yes	1995: 80% within 5 working days 1996: 90% within 5 working days	1995: 95% within 5 working days 1996: 97% within 5 working days
DK	No	95% on the date agreed upon with the customer. Remaining 5% within 10 days.	96% within target
D	Yes	80% within 4 weeks (20 working days)	First half of 1996: within 10 working days: 77.4% within 15 working days: 82.5% within 20 working days: 85.5% Second half of 1996: within 10 working days: 78.5% within 15 working days: 81.4% within 20 working days: 83.3%
EL	Yes	Within 1 week (in 2003)	In 92% of exchanges less than 17 days
E	No	Within 30 days	1995: within 3.3 days 1996: within 3.3 days
F	n/a	Within 5 working days (by the end of 1998)	1995: within 7 days 1996: within 6.5 days
IRL	No	Within 11 calendar days	Within 11 calendar days
I	Yes	For new connection: within 10 days ³⁰	1995: 98.7% within target 1996: 97.8% within target
L	n/a	Within 20 working days (Target for 1998 ^o)	69% within 30 days 98% within 3 month 2% over 3 month
NL	Yes	Within 1 month	97% within target, 91% within 10 days
AUT	No	Within 7 days	Within 10 days
P	Yes	Within 1.6 month	Within 0.3 month
FIN	n/a	1996: Within 5 days on average	1996: Within 3.8 days on average
SWE	No	Within 17 days	99% within target
UK	Yes	BT has targets for: Residential- within 8 working days Business- within 6 working days	BT achieved: Residential- 76.3% satisfied target Business- 70.3% satisfied target

³⁰ new target established in 1997, previous target was within 60 days.

Table 4: Target Period for Fault Repair, Repair Times and Compensation Schemes

(Source: National replies to 1997 Commission questionnaire)

Country	Fault repair times		Compensation Schemes
	Target	Actual repair times	
B	1995: 76% before end of the next working day 1996: 80% before end of the next working day	n/a	n/a
DK	24 elapsed hours	25 elapsed hours ³¹	Tele Denmark makes a proportionate reduction in the subscription charge for the period in question, provided that the amount exceeds DKK 25.
D	3 working days 2 working days (since 01/07/1995) 24 hours (since 01/07/1998)	First half of 1995: 85.53% within target First half of 1996: 90.06% within target Second half of 1996: 83.5% within target	Delay up to 48 hours: 25 DEM credit; delay over 48 hours: 50 DEM credit
EL	95% on the following working day (in 2003)	65% the following working day	n/a
E	Within 15 hours	1995: 8.33 hours 1996: 9.10 hours	The proportional part of the monthly rent is reimbursed if fault repair time exceeds 6 days.
F	1995: 92% the same day or before next working day in normal cases 1996: as for 1995	1995: 88.3% 1996: 88.7%	n/a
IRL	18 hours	18.6 hours	n/a
I	Within 2 working days	1995: 67.4% same day, 97.9% within 2 days 1996: 60.4% same day, 95.4% within 2 days.	Reimbursement of the monthly subscription for every 2 days of delay to repair line in excess of the second working day of report
L	Target for 1998: within 16 working hours	93.7% same day, 100% within 10 days	The rental charge is reimbursed if the service interruption exceeds five days after notification to the operator
NL	Within 5 working days	99% within target, 98% within 2 working days	If the repair targets are not met, the monthly rental will be reimbursed twice.

³¹ The figure shows the number of finished fault repairs multiplied with the middle repair time of all faults reported.

Table 4 continued

Country	Fault repair times		Compensation Schemes
	Target	Actual repair times	
AUT	Within one working day	93% within 24 hours	n/a
P	85% within 2 working days	80.5% within 2 working days	Reimbursement of the monthly subscription corresponding to the number of days for which service was interrupted whenever such interruption exceeds 48 hours
FIN	1996: 78% within working day	1996: 75.5% within working day	There is a reimbursement of a monthly basic fee if the line is out of order more than 48 hours within one month;
SWE	55% within 8 working hours 100% within 2 working days	75-80% within first target 92-95% within second target	Three months of free subscription if not repaired within 5 days. Six month of free subscription if not repaired within 10 days.
UK ³²	Business: BT has a target of 5 working hours Residential: BT has a target of 9 working hours	Business: BT achieved 88.8% within 5 working hours or by successful appointment. Residential: BT achieved 79.8% within 9 working hours or by successful appointment.	BT's business customers receive £25 for loss of service, or if the customer can prove an actual financial loss they will be fully compensated up to a maximum of £5,000. Some other companies offer similar schemes. Residential customers receive compensation based on line rental charges for loss of service, or if they can prove an actual financial loss they will be fully compensated up to a maximum of £1000;

³² Supply times figures relate to the period October 1996 to March 1997; figures for the preceding six month are: residential 85.7% and business 89.8%. Other telecoms companies, who are not universal service providers, report performance in "Telecommunications Companies - Comparable performance indicators" published by P-E International

Table 5: Average Percentage of Public Payphones in Working Order during 1996

(Source: National replies to 1997 Commission questionnaire)

Country	Average percentage pay-phones in order	
	1994 ³³	1996
B	n/a	n/a
DK	92% (coin) 97% (card)	95%
D	n/a	n/a
EL	95%	n/a
E	n/a	98.5%
F	n/a	99.5%
IRL	over 93%	94% ³⁴
I	n/a	n/a
L	over 93%	over 98%
NL	95%	96%
AUT	97%	97%
P	99.9%	99.8%
FIN	n/a	n/a
SWE	98%	94%
UK	94.6%	94.3% ³⁵

³³ Data in this column was reported from National Regulatory Authorities in autumn 1995. Data is therefore most recent information available at that time (normally 1994).

³⁴ Target for pay-phones in working order is 95%

³⁵ This figure relates to the period October 1996 to March 1997; for the preceding six month, the figure was 95.3%.

Table 6A: Customer Complaints and Consumer Protection

(Source: National replies to 1997 Commission questionnaire)

Country	Does an independent body exist to deal with consumer complaints?	Is there a charge or a fee for consumer complaints?	When can consumers make use of the appeal mechanism?	No of complaints dealt with in 1995/96	Are considerations of the independent body for consumer complaints published?	Mechanism for consumer influence on Telecoms Policy
B	Yes, the Ombudsman telecommunications	No charge	There are no procedural restrictions	1995: 2,155 1996: 4,459	The ombudsman service publishes an annual report of its activity.	Consumer organisations are represented in the Consultative Committee of Telecommunications.
DK	Yes. (i) The National Telecom Agency "Telestyrelsen". (ii) The appeal board is "The Telecommunications Consumer Board"	No fee for consumer complaints to the NTA. A fee of 150 DKK for consumer complaints to the appeal board	On the USO-providers non observance of the delivery terms, including subscription terms and consumer protection rules.	1995: app. 200 1996: app. 1000	The Telecommunications Consumer Board is obliged to publish decisions of general interest.	There are consumer representations in : (i) the National Advisory Council on Telecommunications (ii) the Telecommunications Consumer Board
D	Yes, the Ministry of Post and Telecommunications and the Petitions Committee of the Bundestag	No charge	Any case of consumer complaint	1996: 601 (complaints and petitions)	Publication is planned for, but has not taken place yet.	Public hearings and consultations are organised as regards e. g. licensing and tariff regulation.
EL	Yes, the National Telecommunications Commission	No charge	No specific procedures have been set so far. The NTC deals with all complaints that have not been resolved at the service provider level.	1995: less than 10	Decisions of the NTC are notified to the interested parties.	Law Nr. 2246/94 provides for an Advisory Committee to the Minister of Transport and Telecommunications, composed of representatives of users and other interested parties. This Committee has not been implemented yet.

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Table 6A continued ...

Country	Does an independent body exist to deal with consumer complaints?	Is there a charge or a fee for consumer complaints?	When can consumers make use of the appeal mechanism?	No of complaints dealt with in 1995/96	Are considerations of the independent body for consumer complaints published ?	Mechanism for consumer influence on Telecoms Policy
E	Yes, consumers can ask the Consumer Arbitration Boards (part of the National Consumer's Institute) for mediation of disputes concerning telecoms services or address their complaints to the Government Delegation to Telefónica de España, S.A.	No charge	Consumers can address their complaints to the Consumer Arbitration Court after they have tried to settle the dispute with the operator.	Consumer Arbitration Boards: 1995: 1,434 1996: 1,275 Government Delegation to Telefónica de España, S.A.: 1995: 4,918 1996: 6,583	Decisions are notified only to the interested parties.	Users and consumers can be members of the Telecommunications Advisory Council which issues opinions on the telecoms policy and drafts studies in this sector.
F	Yes, consumers can address their complaints to consumer organisations, to the Institut National de la Consommation (INC), to the Direction Générale de la concurrence, de la consommation et de la répression de fraudes (DGCCRF), to the Autorité de régulation des télécommunications (ART), to the Direction des Postes et Télécommunications and to the Médiateur de la République.	DGCCRF: no charge Consumer organisations: n/a ART: no charge Médiateur: no charge	Only disputes which could not be settled at the local level are dealt with by the DGCCRF. Consumer organisations normally only act on behalf of their members. The Médiateur can intervene if all other legal instruments are exhausted.	DGCCRF: 100 to 250 cases a year Médiateur: 30 cases a year Direction des Postes et Télécommunications: 40 complaints	Although the consumer organisations, the Médiateur de la République, DGCCRF and ART publish annual reports, there is no publication related specifically to consumer complaints.	Consumer interests are represented by the Commission Consultative des Radiocommunications (CCR) and by the Commission Consultative des Réseaux Service de Télécommunications (CCRST). The conclusions of these two commissions are dealt with by the Commission Supérieure du Service Public des Postes et Télécommunications. France Telecom must involve consumers in consultations on tariffs and services concerning universal service.

Table 6A continued ...

Country	Does an independent body exist to deal with consumer complaints?	Is there a charge for consumer complaints?	When can consumers make use of the appeal mechanism?	No of complaints dealt with in 1995/96	Are considerations of the independent body for consumer complaints published?	Mechanism for consumer influence on Telecoms Policy
IRL	Yes. (i) Office of the Ombudsman (ii) Office of the Director of Telecommunications Regulation	No charge	The Ombudsman is empowered to examine complaints of consumers against Telecom Eireann if all other avenues of appeal have been exhausted. The Office of the Director of Telecommunications Regulation examines complaints made by service providers pursuant to sector specific EU legislation.	Ombudsman: 1995: 260 1996: 258 NRA: 1995: n/a (prior to 1996 "disputes" involving service providers were dealt with on an informal case by case basis) 1996: 10	The results of the examinations are published in the Ombudsman Annual Report. The results of complaints examined by the NRA are notified to the parties concerned and the European Commission (where appropriate).	General policy in the telecomms sector lies in the competence of the Minister for Public Enterprise to whom representations are addressed.
I	Yes, the Authority for Telecommunications, which will be established according to Law n° 249 of 31/07/1997, will be competent for consumer complaints.	No charge	n/a	n/a	No	A public consultation is organised.
L	Yes, consumers can address their complaints to the Ministry of Communications, which is assisted by an independent body, the Institut Luxembourgeois des Télécommunications.	No charge	There are no restrictions to appeal to this body.	n/a	n/a	n/a

Table 6A continued ...

Country	Does an independent body exist to deal with consumer complaints?	Is there a charge or a fee for consumer complaints?	When can consumers make use of the appeal mechanism?	No of complaints dealt with in 1995/96	Are considerations of the independent body for consumer complaints published?	Mechanism for consumer influence on Telecoms Policy
NL	Yes, the Stichting Geschillencommissies Consumentenzaken, Geschillencommissie Telecommunicatie en Post	No charge	Whenever a consumer and PTT Telecom cannot reach an agreement, the customer has the option to appeal to the the Stichting Geschillencommissies Consumentenzaken, Geschillencommissie Telecommunicatie en Post	1995: 44 1996: 49	A summary of the number of complaints and an indication of the decision is published in the annual PTT concession report and the annual report of the Stichting Geschillencommissies Consumentenzaken, Geschillencom. Tel. en Post	The National Consumer Organisation (Consumentenbond) is represented in the OPT (Representative body for Post and Telecommunications, where the government, all industry players, consumer and user organisations and employer/industry interest organisations are brought together).
AUT	There is a voluntarily established appeal board within the Chamber of Labour available for consumer complaints. From 1 November 1997, the Telecom Control Company (the NRA) is responsible for consumer complaints.	n/a	The appeal board is competent for complaints related to billing.	1995 (4. Quarter): 30 1996: 91	There is no formal procedure for the publication of decisions and considerations.	Apart from the public consultation process during the drafting of new legislation, there are no special mechanisms for the involvement of groups representing users and consumers.
P	Yes, the ICP (Instituto das Comunicações de Portugal) handles consumer complaints. Complaints can also be made to consumer organisations like the Instituto do Consumidor, DECO, UGC and FENACCOOP.	No charge	ICP can deal with customer complaints without prejudice of the appeal to the judicial or arbitration courts under the terms of the general law.	n/a	No publication	According to the Decree-Law 24/96, consumer associations have the right to be consulted about prices in several sectors, one of which is telecoms. ICP has an Advisory Council which is composed of representatives of several ministries and of the Instituto do Consumidor.

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Table 6A continued ...

Country	Does an independent body exist to deal with consumer complaints?	Is there a charge or a fee for consumer complaints?	When can consumers make use of the appeal mechanism?	No of complaints dealt with in 1995/96	Are considerations of the independent body for consumer complaints published?	Mechanism for consumer influence on Telecoms Policy
FIN	The Telecommunications Administration Centre (TAC) handles consumer complaints.	No charge	Consumers can turn to the TAC anytime they are not satisfied with the public telecoms operator as long as the matter falls under the Telecommunications Market Act.	50 (most complaints referred to the amount of the phone bill)	They are not published, but they are publicly available on request.	Consumer interest organisations and organisations representing users with specific needs have the possibility to deliver opinions on draft legislation. User organisations can also approach the regulator in a telecoms issue.
SWE	Consumer complaints are dealt with by the Swedish Consumer Agency (former National Board for consumer Policies). It protects consumers as a group against unfair marketing and unjust behaviour. Individual consumer complaints are dealt with by the Local Consumer Information or by the National Board for Consumer Complaints. PTS is responsible for coordinating the co-operation between PTS and the Swedish Consumer Agency.	There is no fee but the customer value must exceed 250/500 SEK respectively depending on the issue.	n/a	n/a	The Swedish Consumer Agency does not publish any of their decisions. The National Board for Consumer Complaints publish their recommendations if they are of public interest.	Disabled people are represented by their specific organisations. In addition, the PTS is funding a special working group within the Information Technology Standardisation (which is a member of ETSI). Furthermore, there is a public consultation related to decisions in telecoms policy.
UK	Consumer complaints about services and equipment can be directed to OFTEL and its National Advisory Committees on Telecommunications (ACTs).	No charge	Consumers are encouraged to take up their dispute or query with their supplier in first instance. Then they can escalate the matter to OFTEL or the ACTs.	1995 ³⁶ : 38.300 1996: 36.050	The more significant actions are reported in OFTEL's Annual Report and sometimes in "OFTEL News".	The ACTs represent the consumer interests in the telecoms sector and advise the Director General of Telecommunications.

³⁶ Figures for 1995 and 1996 show OFTEL's consumer complaints and enquiries

Table 6B: Name and Address Details of Consumer Complaints Body

(Source: National replies to 1997 Commission questionnaire)

Country	National Independent Consumer Complaint Body	
	Phone, fax, www	Name and Address
B	Ph: (+32) 2 2230909 Fax: (+32) 2 2198659	Ombudsman telecommunications Place des Barricades 1 1000 Bruxelles
DK	Ph: +45 3543 0333 Fax: +45 3543 1434 e-mail: tst@tst.dk http://www.tst.dk	National Telecom Agency Holsteinsgade 63 DK-2100 Copenhagen
D	Ph: 0228 14-0 Fax: 0228 14-88 72	Federal Ministry for Post and Telecommunications (BMPT) Heinrich-von-Stephan-Str. 1 53105 Bonn
EL	Ph: (+30) 1 6805040 Fax: (+30) 1 6805049	National Telecommunications Commission Kifissias 60 15125 Maroussi Athens Greece
E	Ph: n/a Fax: n/a	Las Juntas arbitrales de Consumo (address details not available)
	Ph: n/a Fax: n/a	Delegation del Gobierno en Telefonica de Espana, S.A. (address details not available)
F	Ph: 01 43 19 30 00	Autorité de régulation des télécommunications (ART) 20, avenue Ségur 75354 Paris 07 SP
	Ph: 01 45 66 20 20 Fax: 01 45 67 05 93	Institut National de la Consommation (INC) 80, rue Lecourbe 75732 Paris Cedex 15
IRL	Ph: (+353) 16785222 Fax: (+353) 16610570 e-mail: ombudman@ombudsman.irlgov.ie http://www.irlgov.ie/ombudsman	Office of the Ombudsman 52 St Stephen's Green Dublin 2
I	Ph: n/a Fax: n/a	n/a (New Telecoms Act provides for independent consumer complaint body to be established)
L	Ph: n/a Fax: n/a	Institut Luxembourgeois des Télécommunications (address details not available)
NL	Ph: (+31) 70 3105310 Fax: (+31) 70 3658814	Stichting Geschillencommissies Consumentzaken Geschillencommissie Telecommunicatie en Post Surinamstraat 24 2585 GJ DEN HAAG
AUT	n/a	n/a (New Telecoms Act provides for independent consumer complaint body to be established)

Table 6B continued ...

Country	National Independent Consumer Complaint Body	
	Phone, fax, www	Name and Address
P	Ph: 01 721 10 00 Fax: 01 721 10 02 http://www.icp.pt	Instituto das Comunicações de Portugal Avaá José Malhoa No 12 1070 Lisboa
	Ph: 01 354 4025 Fax: 01 314 24 10	Instituto do Consumidor Praça Duque de Saldanha, 31, 3º, 1000 Lisboa
	Ph: 01 357 39 08 Fax: 01 357 78 51	Associação Portuguesa para Defesa do Consumidor Ava Defensores de Chaves, 22 -1º, 1000 Lisboa
	Ph: 01 395 76 76	UGC - União Geral dos Consumidoes Rua de Buenos Aires. 11 c/v, 1200 Lisboa
	Ph. 01 814 69 69 Fax: 01 814 69 90	Federação Nacional das Cooperativas de Consumo, Rua da Guiné, 8 - R/C Dtº, 1170 Lisboa.
FIN	Ph: +(358) 9 69661 Fax: +(358) 9 6966410 http://www.thk.fi	Telecommunications Administration Centre Vattuniemenkatu 8 A, PL 53 FIN-00211 Helsinki
SWE	Ph: (+46) 8 783 1700 Fax: (+46) 8 783 1701 http://www.arn.se	National Board for Consumer Complaints Klarabergsgatan 35 Box 174, S-101 23 Stockholm
UK	Ph: 0171 6348888 Fax: 0171 6348845 e-mail: crs.oftel@gtnet.gov.uk http://www.open.gov.uk/oftel/oftelhm.htm	OFTEL, Consumer Representations 50 Ludgate Hill London EC4M 7JJ
	Ph: 01232 244113 Fax: 01232 247024	Northern Ireland Advisory Committee on Telecommunica- tions 7th floor, Chamber of Commerce House, 22 Great Victoria Str. Belfast BT2 7QA
	Ph: 0131 244 5576 Fax: 0131 244 5696	Scottish Advisory Committee on Telecommunications 2 Greenside Lane, Edinburgh EH1 3All Welsh Advisory Committee on Telecommunications
	Ph: 01222 374028 Fax: 01222 668536	Welsh Advisory Committee on Telecommunications Caradog House, St Andrews Place Cardiff CF1 3BE

Table 7: Overall % Change in Tariffs
(Source: National replies to 1997 Commission questionnaire)³⁷

Overall % Change in Tariffs				
Country	% Nominal Change	% Real Change	Change in Consumer Price Index	Period
B	+4%	n/a	1995: 1.4% 1996: 2.4%	1995 - 09/1997
DK	-2.1%	-6.3%	+4.2%	01/1995 - 01/1997
D	n/a	-19.9% ³⁸	n/a	1995 - 1996
EL	1995: +14.5% 1996: +5.6% 1997: +4.5%	n/a	1995: 9.27% 1996: 8.50%	1995 - 1997
E	n/a	n/a	1995: 4.33% 1996: 3.21% 1997: 2.1% ³⁹	1995 - 1997
F	Total: -16.4% Resid.: -8.8%	Total: -19% Resid.: -11.6%	1995: 1.7% 1996: 1.9% 1997: 1.3%	01/1995 - 10/1997
IRL	-7%	-12%	+2.5%	04/1995 - 03/1997
I	-6.9%	-16.7%	+11.7%	1995 - 1997
L	n/a	n/a	n/a	n/a
NL ⁴⁰	Private users +10% Buss. Users -7.5%	n/a	+1.03%	1995 - 1996
AUT	0.0% ⁴¹	n/a	n/a	1995 - 1997
P	0.0%	-5.6%	1995: 4.5% 1996: 3.5% 1997: 2.3% ⁴²	1995 - 1997
FIN	-4%	-6%	1.53% ⁴³	1995 - 1997
SWE	-3.2%	-4.7%	1.5% ⁴⁴	01/1996 - 09/1997
UK	-13.4%	-20.8%	+9.4% ⁴⁵	1994/95 - 1996/97

³⁷ These responses have been provided by national regulatory authorities and the respective periods are given. Annex II presents the evolution in prices for three consumer usage baskets during the period 1990-97 for each Member State.

³⁸ Tariff changes for international calls are not included in this figure

³⁹ Estimate

⁴⁰ The Netherlands introduced VAT on telecommunications services in 1996

⁴¹ A new tariff scheme will enter into force on 1 November 1997

⁴² 1997: Estimate

⁴³ Consumer Price Index - 01/1995: 110.9 and 01/1997: 112.6

⁴⁴ The Consumer Price Index increased 0.5% during 1996 and is estimated to increase 1.0% during 1997.

⁴⁵ Retail Price Index development - July 1994: 144.0; July 1997: 157.5.

Table 8: Breakdown of Tariff Changes in Recent Years

(Source: National replies to 1997 Commission questionnaire)

Tariff changes between 1995 and 1997 (nominal and real terms)								
Country	Period	Overall change	Installation	Rental	Local	Regional	National	International
B	1995 - 09/1997	Nom: +4%	Nom: 0%	Nom: +20% (large zones) +18% (medium) +17% (small zones)	Nom: +12%	Interzonal a: - Nom: -68% Interzonal b: Nom: -18%	n/a	France: Nom: -10% USA: Nom: -17% UK: Nom: -10%
DK	01/1995 - 01/1997	Nom: -2.1% Real: -6.3%	Nom: 0.0% Real: -4.2%	Nom: 0.0% Real: -4.2%	Nom: 0.0% Real: -4.2%	Nom: 0.0% Real: -4.2	Nom: 0.0% Real: -4.2%	Nom: -6.8% Real: -10.8%
D ⁴⁶	1995 - 1996	Real: -19.9% ⁴⁷	Real: +33.5%	Real: +5.95	Real: -6.05%	Real: -4.8%	Real: -25.8%	Real: -19.47%
EL	1995 - 1997	Nominal terms: 1995: +14.5% 1996: +5.6% 1997: +4.5%	Nom: -44.4%	Nom: +27.6%	Nom: 27.3%	Nominal terms: 1995: +8.5% 1996: +3.5% 1997: -1.78%	Nominal terms: 1995: +8.5% 1996: +3.5% 1997: -1.78%	Nominal terms: 1995: +5% 1996: +1.5%
E	1995 - 1997	n/a	First line: Nom: 0.0 % Second line: Nom: -43%	Nom: 0.0%	Nom: 0.0%	Nom: 0.0%	Nom: -8.7%	EU: Nom: -24% USA: Nom: -38%
F	01/1995 - 10/1997	Nom: -16.4% Real: -19%	n/a	Resid.: Nom: +51.1% Real: +46.4% Profess.: Nom: +40.1% Real: +35.7%	Nom: -2% Real: -5.1%	Nom: -28.9% Real: -31.1%	Nom: -46.9% Real: -48.5%	Nom: -47.7% Real: -49.3%
IRL	04/1995 - 03/1997	Nom: -7% Real: -12%	Nom: 0% Real: -5%	Nom: 0% Real: -5%	Nom: 0% Real: -5%	Nom: 0% Real: -5%	Nom: -16% Real: -21%	Nom: -21% Real: -26%

⁴⁶ No direct comparison can be made with regard to nominal price changes, as Deutsche Telekom laid down new tariff zones on 1 January 1996.

⁴⁷ Tariff changes for international calls are not included in this figure.

⁴⁸ Tariff to North America - nominal change -63,3%, real change - 64,7%.

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Table 8 continued

Tariff changes between 1995 and 1997 (nominal and real terms)								
Country	Period	Overall change	Installation	Rental	Local	Regional	National	International
I	1995 - 1997	Nom: -6.9% Real: -16.7%	Nom: 0.0%	Nom: + 29.7% for resid. Nom: + 47.7% for buss.	Nom: -6.2%	Nom: -22.7%	Nom: -22.7%	Nom: -11%
L	1995 - 1997	n/a	Nom: 0.0%	Nom: +27.3%	see national	see national	1996: Peak: nom. 0.0% Cheap: nom. 0.0% Night: nom. -50%	1996: Nom: - 10% to - 45%
NL	change by 1 January 1996 ⁴⁹	Private users Nom: +10% Buss. Users Nom: -7.5%	n/a	n/a	n/a	n/a	n/a	n/a
AUT ⁵⁰	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
P	1995 - 1997 ⁵¹	Nom: 0.0% Real: -5.6%	Nom: +9.3% Real: +3.2%	Nom: +18.4% Real: +11.8%	Nom: +17.6% Real: +11.0%	Nom: +11.9% Real: +5.6%	Nom: -11.8% Real: -16.7%	European: - Nom: -18.7% Real: -23.2% International: Nom: -15.5% Real: -20.2%
FIN	1995 - 1997	Nom: -4% Real: -6%	Nom: 0% Real: -2%	Nom: +2% Real: +1%	Nom: -10% Real: -11%	n/a	Nom: -7% Real: -8%	Nom: -15% Real: -16%
SWE	01/1996 - 09/1996	Nom: -3.2% Real: -4.7%	Nom: -48.6% Real: -49.3%	Nom: -2.4% Real: -3.9%	Nom: +37.1% Real: +35.2%	Nom: +1.5% Real: +0.0%	Nom: -32.5% Real: -33.5%	Nom: -21.8% Real: -23.0%
UK	1994/95 - 1996/97	Nom: -13.4% Real: -20.8%	Residential: Nom: - 0.6% Real: -9.1% Business: Nom: -11.3% Real: -18.9%	Residential: Nom: +12.4% Real: +2.8% Business: Nom: +9.7% Real: +0.3%	Nom: -9% Real: -16.8%	Nom: -10.1% Real: -17.8%	Nom: -31.9% Real: -37.7%	Nom: -21.8% Real: -28.5%

⁴⁹ All tariffs have changed since the introduction of VAT on 01/01/1996 by +10% (private users) and -7.5% (business users). Real terms not available.

⁵⁰ A new tariff scheme will enter into force on 1 November 1997

⁵¹ Foreseen 1997 price changes have been included in tariff change figures

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Table 9: Retail price regulation, price cap controls and requirements on affordable tariffs

(Source: National replies to 1997 Commission questionnaire)

Country	Price cap controls on retail prices	Affordability requirements	How is affordability measured?
B	There is a price cap based on a general basket of services foreseen in the management contract with Belgacom. Starting from 1998, the price increase will be limited to RPI - 1% for residential customers.	Yes	Affordability means that current tariffs do not exceed the price cap of RPI - 1%.
DK	The price-cap regulation of Tele Denmark for the period 01.01.97 to 31.12.97 covers two main areas of Tele Denmark's services: i) basic telephony services are subject to a price cap of NPI-3% ii) Certain specific prices are subject to a price cap of NPI-1%.	No	No specific criteria
D	A price cap system is expected to be introduced on 01/01/1998.	The "Telekommunikations-Universaldienstleistungsverordnung" (Regulation on USO) contains an affordability requirement.	Affordability is measured in accordance with the real price for telecoms services which are demanded by an average household outside of towns with more than 100,000 inhabitants.
EL	From 01/01/1997 to 31/12/1997 weighted average increase in OTE tariffs cannot surpass the percentage change of the CPI more than 3%. From 1998 to 2000, tariffs must reflect the costs of service provision and avoid cross-subsidies.	No	n/a
E	The price cap is based on the sector costs, productivity and CPI.	Yes	No specific criteria
F	Two price caps have been inserted in the contract with France Telecom: 1) Price cap based on basic voice telephony services (1995: CPI - 4.5%, 1996: CPI - 5.5%, 1997: CPI - 6%, 1998: CPI - 6.5%) 2) Price cap for leased lines: CPI - 10% (annual average, tariffs must not exceed CPI by more 2% at any time) A new price cap is developed (1998 - 1999: CPI - 9%, 1999 - 2000: -4.5%)	An affordability requirement is included in the Telecommunications Law of 26/07/1996.	Affordability is measured by comparison of different segments of users and of international standards.
IRL	Prior to 1997 increases in telephone charges required approval by the Minister of State responsible for the telecommunications sector. Telecom Eireann's tariffs are now subject to a price cap formula whereby overall prices must decrease by CPI - 6% every year until further reviewed after two or three years.	Yes, price increases by the former monopoly provider of telecommunications services are subject to control.	No specific criteria

Table 9 continued

Country	Price cap controls on retail prices	Affordability requirements	How is affordability measured?
I	No price cap control is effective up to now. It is foreseen that it could be inserted in a contract to be signed with the incumbent operator in the next future. Additionally, Law n° 249 of 31/07/1997 provides for a price cap control for tariff changes until 1999.	Universal service must be provided at affordable tariffs in the new telecoms legislation.	No specific criteria
L	n/a	n/a	n/a
NL	<p>There are two price cap systems for PTT:</p> <p>1) The "total basket" system, including a broad range of services such as voice telephony, telex, telegraph and cell-phone calls</p> <p>2) The small user's basket system: basic VT and cell-phone services for individuals and small business users</p> <p>PTT is allowed to raise tariffs in line with the expected increase of the CPI for both the year in question and the subsequent year. In particular circumstances, PTT may apply to the Minister of Transport to exceed the price cap by no more than 3% overall for each basket if PTT cannot rebalance tariffs within the price caps.</p>	No	No specific criteria
AUT	A price cap is included in the approval conditions of the new PTA tariffs.	Affordability requirements are to be found in § 24 of the new Telecommunications Act	The price is affordable if the price level valid on 1 January 1998 is not exceeded.
P	<p>The Price Convention signed between ICP and Portugal Telecom determines that the weighted average variation of the fixed telephone service prices should not exceed 3% in nominal terms for 1995, and CPI - 2% for 1996 and 1997, respectively.</p> <p>Price variation related to installation, subscription fees and each traffic type must not exceed 7.5% in 1995, and CPI + 6% in 1996 and 1997, respectively.</p> <p>A new Price Convention for the period from 1998 to 2000 was signed recently (CPI -4% in nominal terms for fixed telephone service; CPI - 2% for the basket, excluding international calls).</p>	Portugal Telecom has to offer affordable prices under its licence.	Prices have to be cost-oriented and non-discriminative.

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Table 9 continued

Country	Price cap controls on retail prices	Affordability requirements	How is affordability measured?
FIN	No price caps	Yes According to Section 1 of the Telecommunications Act, prices have to be affordable.	No specific criteria
SWE	According to the revised Telecommunications Act (entered into force 01/07/1997) the dominant operator on the Swedish market is obliged to follow a price cap regulation on line rental for basic telephony. The price cap implies that line rental prices may only be changed in pace with general price development, measured as net price index. The price cap also applies to supplementary elements such as entrance fee, transfer of subscription and change of main line.	For time being Telia is the only operator that should be obliged to provide uni-versal service. The provision of univer-sal service is regulated in Telia's li-cence.	Three criteria are stated in the Tele-communications Act. 1) Affordability should be defined from the consumer' perspective 2) The cost to provide the service should be taken into consideration. If the technical developments result in lower cost, this should be reflected in end-user tariffs. 3) Prices should be set with regard to average prices, although price variations between regions or dif-ferent market segments are allowed.
UK	BT can increase prices overall for its PSTN basket ⁵² by no more than: 1 August 1993 - 31 July 1997: RPI - 7.5 % 1 August 1997 - 31 July 2001: RPI - 4.5 %	Affordability of basic telecoms services remains one of OFTEL's objectives (also confirmed in the Universal Service State-ment), which will be ensured by the existing li-cence conditions on BT according to OFTEL. An improvement could be made through the introduction of a new service package (Residential Limited Service Scheme)	No specific criteria, but telephony price trends, residential penetration levels and market research results are taken into account.

⁵² The basket contains e.g.: residential and business exchange line rentals; light user scheme, connection charges, take-over charges, local-, regional-, national and international direct dialled calls

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Table 10: Special Tariffs and Low User Schemes

(Source: National replies to 1997 Commission questionnaire)

Country	Schemes targeted towards customers with disabilities	Schemes targeted towards low income users	Schemes to offset adverse impact from tariff re-balancing
B	Around 370,000 disabled and elderly people benefit from a social telephone rate (70% reduction on connection charges, 50% reduction on rental fee, 50 free units of traffic for 2 months) according to the Royal Decree on Universal Service.	The social telephone rate can also be applied to low income users.	None
DK	There are specific text-telephone service for hearing impaired users, including special terminal equipment and reduced tariffs for visually impaired and blind users when using Directory Services.	None	None
D	n/a	n/a	n/a
EL	Special reduced rates have been introduced for blind subscribers. They are allowed 150 units/month free of charge on the first main telephone line they have subscribed. Additionally, specially designed public pay-phones have been installed at airports, railway and bus stations and hospitals. The OTE licence provides that at least 0.5% of public pay-phones must be specially adapted.	None	n/a
E	There is a special "social subscription" that consists of a 95% discount on the monthly fee and a 70% discount on the initial connection fee for disabled and persons over 64 (unless they exceed a certain income).	n/a	n/a
F	Disabled persons will be offered a special tariff which is being elaborated at the moment. Operators who offer such tariffs can deduct net costs of this special tariff from their contribution to the universal service fund. France Telecom offers free directory services for blind users, 50% reductions for certain services for war-disabled and specially designed public pay-phones. Deaf can get special equipment free of charge. Persons over 65 don't have to pay for the connection.	Low income users will be offered a special tariff which is being elaborated at the moment. Operators who offer such tariffs can reduce net costs of this special tariff from their contribution to the universal service fund. France Telecom offers free access to certain local services for certain users (e.g. receiving unemployment benefit).	An automatic reduction related to tariff re-balancing is offered to more than 1m residential users. A second scheme ("consommation modérée") applies to more than 3m residential users.
IRL	None. However, the department of Social Welfare meets the line rental and charges up to a certain limit.	None	None

Table 10 continued

Country	Schemes targeted towards customers with disabilities	Schemes targeted towards low income users	Schemes to offset adverse impact from tariff re-balancing
I	n/a	A specific low user scheme is in force (rental fee: ~ - 50%, low tariffs for low consumption).	n/a
L	None	None	None
NL	PTT Telecom offers free directory enquiries service to visually impaired and there are possibilities (subject to income) for hearing impaired users to get a free text telephone	None	None
AUT	Handicapped persons are exempted from paying the monthly connection fee and the equivalent of one hour local charge per month.	Low income users, students and pensioners are exempted from paying the monthly connection fee and the equivalent of one hour local charge per month.	n/a
P	Operators are obliged to grant telephones with amplifiers, call warning and similar facilities to persons with special needs.	There are special tariff reductions for retirees and pensioners with a monthly salary less than the national minimum (60% reduction of subscription fees and at least 25 units free of charge per month). The new Price Convention introduces a "Low Scheme" for users who do not exceed a certain amount of traffic	n/a
FIN	No special tariff schemes. The state finances special services for disabled.	None	None
SWE	Visually handicapped have access to directory enquiries free of charge. This service is paid by the PTS.	Telia Mini (low consumption subscription) is still provided by Telia even though it is no longer an obligation after 01/07/1997.	n/a
UK	Free priority fault repair: for customers whose telephones are a vital lifeline, this scheme ensures priority treatment in the event of a fault Typetalk: deaf and speech impaired users have access to this service (which BT is obliged under its licence to fund). A text user rebate scheme is available to compensate them for the fact that calls from the text phones take longer to complete than ordinary calls. Free conversion of hardwired connections: vulnerable customers can get old style connections converted into modern plug and socket connections free to enable connection to community alarms and to more user friendly telephones. All companies provide free Directory Enquiries to visually impaired customers and others unable to use a printed phone book.	Spread connection fee: divides the initial connection charge into 5 quarterly payments Call levels: new customers are asked to agree a financial ceiling on call expenditure largely eliminating the need for deposits Low User Scheme: offers users with low call bills a rebate on line rental up to a maximum of 61%	None

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Table 11: Special Tariff Obligations on Designated Operators

(Source: National replies to 1997 Commission questionnaire)

Country	Obligations placed on operator(s) to offer uniform pricing throughout the national territory	Plans for new requirements relating to special tariff schemes
B	Belgacom must offer uniform prices till the end of 1997. The government does not intend to maintain this obligation after 1997.	It is planned that people with a minimal income will receive 25 telephone units free of charge every month.
DK	The appointed US Provider - Tele Denmark - is obliged to provide (i) a network with a telephone service, (ii) an ISDN-network with ISDN services, (iii) leased lines up to 2Mbit/s, and (iv) special services for disabled users who request so, at equal terms and at maximum prices fixed in advance.	A more detailed regulation of the extent of US obligation including price schemes for special services for disabled people is under preparation.
D	n/a	n/a
EL	There is no such obligation. Nevertheless, OTE uses the same cost basis (including basic fees) throughout Greece for voice telephony services.	n/a
E	n/a	n/a
F	Article 3 of France Telecom's licence provides that no discrimination in tariffs shall be based on geographic grounds, unless exceptional difficulties of connection to certain users justify geographic differences in tariffs.	Special tariff schemes related to USO (low user schemes...) are being elaborated.
IRL	n/a	None
I	The operators shall offer uniform prices throughout the national territory.	None
L	n/a	n/a
NL	According to the Telecommunications General Directives Decree, all mandatory telecoms services must be supplied at uniform tariffs and on uniform conditions throughout the Netherlands. PTT Telecom has the obligation to provide for access to and use of the public telephone networks and the basic telephone service towards all subscribers/ applicants. A similar system is in place for provision of leased lines.	None

Table 11 continued

Country	Obligations placed on operator(s) to offer uniform pricing throughout the national territory	Plans for new requirements relating to special tariff schemes
AUT	The special tariff schemes for disabled and low income users cover the whole national territory.	Special tariffs for business users entered into force on 1 November 1997.
P	The Concession Agreement provides that the tariff scheme in force for the services object of concession is applied in an uniform way.	None
FIN	There no obligations to offer uniform prices. However, the regulator can intervene if prices are not affordable.	None
SWE	Geographical price variations are allowed to a limited extent according to the revised Telecommunications Act. Licence holders should provide telephony services on similar conditions to anyone who requests such services. This means that differences in service provision and price levels are allowed between different customer groups or between similar customer groups in different market situations. Uniform prices, without the possibility to lower the prices in regions or segments where competition is hard, result in higher average prices.	None
UK	BT is required to offer geographically averaged tariffs under its licence (Art 17). Oftel is studying whether this policy could be relaxed for advanced services (but not for services covered by the universal service obligation. There is also an obligation on BT to provide a Low User Scheme which gives a discount on line rental to customers where call bills are low.	The Residential Limited Service Scheme will be a new requirement for BT. It offers a very limited range of services at a very cheap price (see also Table 12).

Table 12A: Special Measures to Help Consumers Control Expenditure - Part A

(Source: National replies to 1997 Commission questionnaire)

Country	Schemes for helping customers obtain a telephone	Schemes for helping customers control their telephone expenditure	Are "deferred payment" arrangements offered?	Are deposit requirements for certain customers waived?	Are "prepayment of bill" arrangement available to customers?
B	n/a	n/a	No	No	n/a
DK	None	Customers are offered on-line access to current billing information at 24 hours intervals. Customers can block their outgoing traffic when it exceeds a certain threshold amount.	No obligation on operators	No regulatory obligations	No regulatory obligations
D	n/a	n/a	n/a	n/a	n/a
EL	The time for initial connection to OTE will be gradually reduced to 1 week by 2003	n/a	No regulatory obligations (it is offered in the majority of cases when requested).	No regulatory obligations (as a rule no deposit is requested with the exception of cases related to unpaid bills).	No
E	50% of the fee for initial connection can be paid in three equal parts with the first three (bimestral) bills.	N/a	50% of the fee for initial connection can be paid in three equal parts with the first three (bimestral) bills.	No deposit requirement exists except from cases of prior non-payment.	No
F	France Telecom offers the possibility to its customers to select the conditions of access to telephone services.	Customers are offered immediate access to current billing information.	Installation fees are included in the first bill the user receives after connection.	No	In 1998, France Telecom will offer prepaid cards for private connections.
IRL	n/a	n/a	n/a	n/a	n/a
I	n/a	n/a	n/a	Yes	Yes

Table 12A continued

Country	Schemes for helping customers obtain a telephone	Schemes for helping customers control their telephone expenditure	Is "deferred payment" arrangements offered?	Are deposit requirements for certain customers waived?	Are "prepayment of bill" arrangements available to customers?
L	n/a	n/a	No deferment of payment for initial connection	On a case-by-case basis, deposit requirements can be waived on request.	On a case-by-case basis, prepayment of bills is possible on request.
NL	PTT has to provide for directory services and operator assistance.	N/a	No	No deposit is required	No
AUT	None	Users connected to digital exchanges will be warned (in writing) if call charges have reached a defined limit. The default setting is ATS 10,000, and can be changed on request. Customers can request tariff information.	None. If the amount for initial connection exceeds ATS 5,000, the connection fee has to be paid in advance.	There is no general deposit requirement. In case of a potential high risk of non-payment, PTA can require a deposit.	The monthly connection fee is to be paid up to three months in advance.
P	n/a	n/a	n/a	The operator can ask for a deposit, but in fact this right is not used.	N/a
FIN	Some connections have a lower installation charge, but a higher fixed charge per year.	N/a	n/a	n/a	Prepayment of telephone bills is only possible for the fixed monthly charge of the connection.
SWE	None	No regulatory obligation	No regulatory obligation	No regulatory obligation	No regulatory obligation
UK	The Residential Limited Service Scheme encourages unphoned households to connect to the telephone network. Customers on the scheme can receive calls and make outgoing calls to emergency services, fault repair services and customer services. Joining fee is £ 9.99.	As part of a new arrangement to secure universal service, BT made a commitment to introduce a new service that will allow customers to pre-determine the amount that they can spend on calls.	Spread connection fee: divides the initial connection charge into 5 quarterly payments; BT make no charge for taking over an existing line, charge for connection in this case is £ 9.99.	Call levels: new customers are asked to agree a financial ceiling on call expenditure largely eliminating the need for deposits	As part of a new arrangement to secure universal service, BT made a commitment to introduce a new service that will allow customers to pre-determine the amount that they can spend on calls.

Table 12B: Special Measures to Help Consumers Control Expenditure - Part B

(Source: National replies to 1997 Commission questionnaire)

Country	Is the facility "selective call barring" offered to control customer expenditure?	Is itemised billing or other expense monitoring means offered?	Obligation for operators to offer "soft disconnection"	Requirement for publication of schemes
B	Selective call barring is possible for premium rate services.	Bills are automatically itemised for international traffic; itemising is also available for national calls.	Soft disconnection is available for residential customers in case of non-payment.	None
DK	Yes, operators are required to offer selective call barring.	Yes, a subscription option provided at cost of service.	None	Operators are required to inform customers about terms and conditions of services on request and at the time of subscription.
D	n/a	n/a	n/a	n/a
EL	In the case of digital exchanges, barring of long distance calls is possible.	Itemised billing is available on request at all digital exchanges. This includes information on all long distance calls.	No such obligation exists. Existing legislation provides for a minimum 30 day deadline following notification of the user in written before definite disconnection.	All terms, conditions and tariffs of subscription must be published by the provider according to existing legislation.
E	Selective call barring is possible for premium rate services.	Itemised billing (for local calls only on request) will be available at the end of 1997.	None; Telefónica de España, S.A., however may offer soft disconnection.	Conditions have to be publicly available for users.
F	Selective call barring is possible, either by means of a code (accès sélective modulable) or by automatic barring.	Itemised billing free of charge is available on request for all calls over 74 ccntimes since September 1997.	Soft disconnection is possible: in case of non-payment, France Telecom offers a time schedule for payment and bars outgoing calls (except from calls to free services or emergency calls).	Information on the above mentioned schemes is obligatory.
IRL	Access to certain premium rate services requires the use of a unique P.I.N.	Itemised billing for regional, national or international calls are generally available at a charge.	None	n/a
I	Available for customers connected to electronic switching	n/a	Soft disconnection (limitation to emergency calls) is possible.	Schemes are published in the official journal and in the telephone directory.

Table 12B continued

Country	Is the facility "selective call barring" offered to control customer expenditure?	Is itemised billing or other expense monitoring means offered?	Obligation for operators to offer "soft disconnection"	Requirement for publication of schemes
L	Selective call barring is possible (international calls, calls to certain destinations, or all calls subject to the payment of charges)	Itemised billing is possible on request and subject to payment of a monthly rental charge.	n/a	n/a
NL	Selective call barring free of charge is possible for premium rate services.	Itemised billing is available, however, this service has to be subscribed to by the customer, who can indicate the level of detail required.	None	Operators must publish all relevant information in their schedule of general conditions.
AUT	Users connected to digital exchanges can get a barring of outgoing calls to defined zones.	Itemised billing is available for users connected to digital exchanges for an extra charge.	The operator has to send a reminder with a new payment deadline of at least two weeks. PTA practice is to bar only active calls as a first step.	n/a
P	Selective call barring free of charge is possible for audiotext services	Itemised billing free of charge is available.	The obligation to ensure "soft disconnection" is included in the new Regulation of Public Telephone Service.	Both special tariffs and low user schemes appear in the legislation of the sector.
FIN	Line and selective call barring are available	The operator must itemise the bill without charge and, if the bill exceeds 150 Mark, without request.	None	Delivery terms of the operator must be in writing and they shall be available for the public without charge.
SWE	Selective call barring is possible for premium rate services.	Itemised billing available on request free of charge.	None	None
UK	Selective call barring is available to most of BT's customers for an additional charge, all BT customers can bar outgoing calls and calls to premium rate services. Other companies offer similar services.	All BT customers can receive free itemised billing. Full itemisation is available on request, although most customers consider that itemisation of calls above 40p is sufficient. Other companies offer similar services.	BT and most other telecomms companies will soon offer an outgoing calls barred service as a result of discussion with OFTEL. This has been agreed to voluntarily.	Details are published in Consumer Codes of Practice, Conditions of Telephone Service and other company publications.

Table 13: Overview of Universal Service Funding Schemes

(Source: National replies to 1997 Commission questionnaire)

Country	Will a USO funding scheme be put in place in 1998?	In case a scheme will be in place in 1998, what type of scheme ⁵³ will be implemented?	Has a scheme been created, but currently kept dormant?
B	No	n/a	A fund for universal service is planned for 1998 but will not be activated before 2000.
DK	No plans, as incumbent does not currently claim to incur a net cost from USO.	n/a	No
D	Yes	The Telecommunications Act (entered into force 01/08/1996) provides that licensees providing universal service get a compensation for any deficit resulting from the provision of universal service. This compensation corresponds to a national USO fund.	The universal service funding scheme ("Ausgleichsmechanismus") will enter into force on 01/01/1998. Nevertheless, USO is just put on operators in case of inadequate provision of universal service in a situation of free competition.
EL	A study on the definition, scope and costs of universal service is expected to be available before April 1998.	n/a	Starting from the recommendations of the study, the NTC will consider the timing and appropriate measures for the introduction of a universal service funding scheme in the country.
E	The Telecommunications Market Commission will decide if USO is a disadvantage in competition for the operator providing universal service.	n/a	The Telecommunications Law provides for a National Universal Service Fund, but a system of supplementary charges for interconnection will also be introduced till the fund is set up.
F	Yes	A national USO fund was established in 1997; additionally, net costs of overall geographic supply will be compensated by interconnection surcharges ⁵⁴ till 31/12/2000 at the latest.	The universal service funding scheme has already been put in place.
IRL	No universal service funding scheme will be introduced before 1 January 2000 (date of liberalisation)	n/a	After the transposition of Directive 97/33/EC on interconnection the issue of any unfair burden through USO will be discussed.

⁵³ (i) A national USO fund, or (ii) a system of supplementary charges, or (iii) a system of direct State support.

⁵⁴ A system of supplementary surcharges is equivalent to so called Access Deficit Contribution, which is distinct from USO contributions.

Table 13 continued

Country	Will a USO funding scheme be put in place in 1998?	In case a scheme will be in place in 1998, what type of scheme ⁵⁵ will be implemented?	Has a scheme been created, but currently kept dormant?
I	Yes	n/a	No
L	No	n/a	A universal service funding scheme has been created by the Telecommunications Law of 21/03/1997, but principles and methodology of this system have not been defined yet.
NL	No	n/a	No scheme has been created so far. A universal service procedure is expected to be incorporated in legislation.
AUT	No. But the Telecommunications Act 1997 provides for a universal service funding scheme.	All participants on the voice telephony market with a revenue of more than 250 million AS will have to contribute to the compensation according to their market share. This is managed by the NRA.	This scheme will only come into effect if a request for compensation is approved by the NRA. If the provider of the USO has a market share of more than 80%, a request for compensation cannot be claimed.
P	n/a	n/a	According to Decree/Law no. 40/95, the concessionaire should specifically demonstrate the associated costs with USO provision and submit them to the approval of a committee including ICP's and concessionaire representatives, which will have to decide about it within 30 days. In case of approval a perfect accounting review follow-up will be initiated. In case of non-approval a consultation procedure will be initiated with other telecoms operators to see if another operator can offer a more favourable economic offer satisfying the same US level and degree of obligations.
FIN	No	No	No
SWE	No	n/a	In case that special funding of USO would be justified in the future, Sweden would apply a fund model.
UK	No	n/a	OFTTEL has proposed the setting up of a working group to develop a "Blueprint" of what USO funding mechanism might look like.

⁵⁵ (i) A national USO fund, or (ii) a system of supplementary charges, or (iii) a system of direct State support.

Table 14: Cost estimates of Universal Service Obligations in EU Member States

(Source: National replies to 1997 Commission questionnaire)

Country	What is the estimated overall net cost of USO at the national level (according to the USO definition in the Community legislation)?	
	In absolute terms	As a % of turnover of voice telephony services
B	No official estimates	No official estimates
DK	n/a	n/a
D	Deutsche Telekom has not given any numbers related to USO so far.	Deutsche Telekom has not given any numbers related to USO so far.
EL	n/a	n/a
E	32,000m - 55,000m Pesetas	2.1% - 3.7% (of the turnover of Telefónica de Espana)
F	4,829 million FF for 1997 6,043 million FF for 1998	5.5% (of 1997 fixed Voice Telephony revenues) ⁵⁶
IRL	n/a	n/a
I	No estimates up to now	No estimates up to now
L	n/a	n/a
NL	Dfl. 377 million (in 1995)	5.5% of total turnover (in 1995)
AUT	n/a	n/a
P	A Working Group will quantify the net costs of USO.	n/a
FIN	Net costs of universal service have not been calculated, since no operator has insisted on any funding mechanism.	Net costs of universal service have not been calculated, since no operator has insisted on any funding mechanism.
SWE	PTS is examining different studies on costs for USO (one by Telia and one by a group of consultants) at the moment.	PTS is examining different studies on costs for USO studies (one by Telia and one by a group of consultants) at the moment.
UK	Costs before benefits are estimated to be £40 - 80million. However, when benefits are taken into account, the net costs are considered to be negligible.	Equivalent to between 0.8 - 1.6 % of BT's domestic turnover in the fiscal year 1996/97.

⁵⁶ Special tariff schemes targeted at certain user groups have not been taken into account

ANNEX II

Affordability and Evolution of Telephone Tariffs
by Consumer Group

(based on an independent study undertaken by Eurodata Foundation)

Monitoring evolution in prices and affordability of basic telephone service

(based on an independent study undertaken by Eurodata Foundation)

Introduction

The real price for telephone service paid for by a subscriber depends on his/her actual telephone usage pattern and the associated tariffs for calls at the local, regional, national and international level, together with recurring fixed rental charges and the one-off charge for installation⁵⁷ of the telephone line and connection of the telephone. Monitoring prices and affordability of basic service in voice telephony should therefore include all these cost elements.

In this Annex graphs for each of the 15 EU Member State are presented. These have been prepared⁵⁸ to monitor developments in prices and affordability of basic telephone service for different types of users. Three user baskets have been defined to reflect usage patterns for 3 different types of consumer: the Average or median user ("The 50% user" whose spending represents median usage), the Low Usage user ("The 25% user" whose spending represents the first quartile of usage), and the Lowest user ("The 10% user" whose spending represents the lowest decile user). These 3 baskets or user profiles have been defined in order to see variations in price developments for different types of usage, in particular for those consumers who are less well-off. They also examine the effects of specific low user schemes that are offered. The baskets cover fixed charges as well as representative levels of domestic and international calls. The number of calls in the baskets define their overall size, while the call distribution with respect to destination, time of day and period, together with the call duration, define the calling profile.

The overall cost development has been different for each of the three types of users. The lowest 10% user makes few calls and therefore the price element driving costs will be primarily the fixed charges. For the average 50% user, the proportion of usage charges in the overall cost is much higher. The lower 25% user falls between the two other types of users in terms of usage charges.

Definitions associated with the underlying calculations of the user baskets⁵⁹

The graphs cover the years 1990, and 1993 through to 1997. For each year the tariff at the beginning of the year is used, except for 1997 where a mid-year tariff (September) is used.

All graphs are presented in national currency. Residential tariffs have been used and all charges and resulting costs are in national currency. Value Added Tax (VAT) is included, where appropriate. Non-recurring installation charges are depreciated over 5 years. Any call set-up or minimum charges have been included in the basket. The inflation rates are indexed to the year 1990 as the basis (100%). The deflators that have been used to correct nominal tariff baskets for changes in national consumer prices over time are given in Table 1.

⁵⁷ An annual depreciation value of the one-off installation charge should be included in the cost calculation of having a telephone, to realistically represent overall cost of telephone usage.

⁵⁸ The graphs are the results of a study carried out by Eurodata Foundation, London for the Commission.

⁵⁹ The following sources of information have been used in the preparation of the three baskets: (i) The OECD basket structure for national PSTN, (ii) a study by OFTEL in 1996 on Median User Bills, (iii) a study from Sweden in 1997 on telephone usage, (iv) information from the Low Cost Unit in the UK, (v) various other information from the Netherlands, UK and Greece.

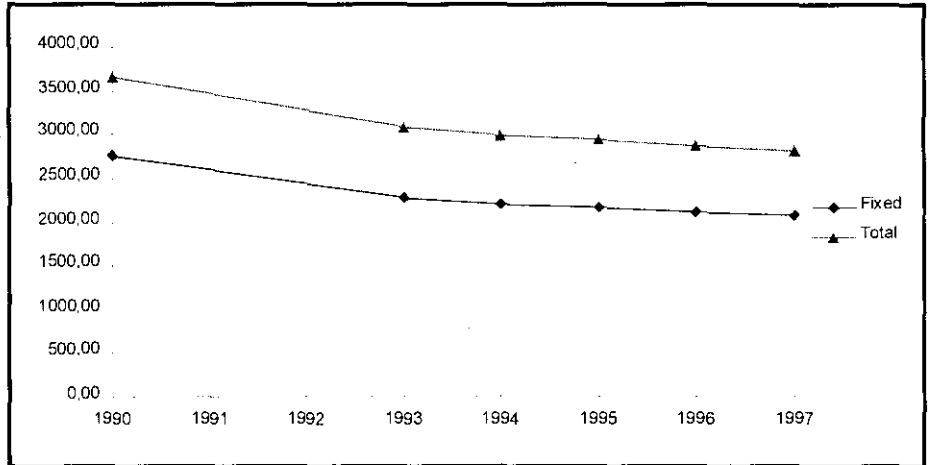
**Price Deflators for Real Price Developments
in each of the 15 EU Member States⁶⁰**

Member States	1990	1991	1992	1993	1994	1995	1996	1997
B	100	104,2	106,6	110,0	113,3	115,3	117,9	119,9
DK	100	102,5	104,5	105,1	106,9	109,0	111,4	113,6
D	100	103,8	108,0	113,1	116,2	118,4	120,5	123,1
EL	100	119,8	137,7	155,8	175,0	189,9	206,1	218,6
E	100	106,4	113,2	119,5	125,3	131,1	135,5	138,5
F	100	103,2	105,7	108,0	110,3	112,1	114,1	116,5
IRL	100	103,0	105,7	107,6	110,6	112,9	114,1	115,8
I	100	104,7	110,6	116,5	121,9	129,0	134,6	138,5
L	100	102,8	108,3	110,7	113,3	114,1	115,6	117,5
NL	100	103,2	106,4	108,7	110,7	113,4	114,9	117,3
AUT	100	103,0	107,0	110,5	114,1	115,9	118,7	121,0
P	100	112,1	122,3	130,4	137,0	142,7	147,4	150,7
FIN	100	105,6	109,9	114,6	116,2	116,5	118,3	119,9
SWE	100	101,4	103,7	110,1	112,8	115,5	118,0	119,1
UK	100	104,6	109,8	113,4	116,4	119,5	122,5	125,4

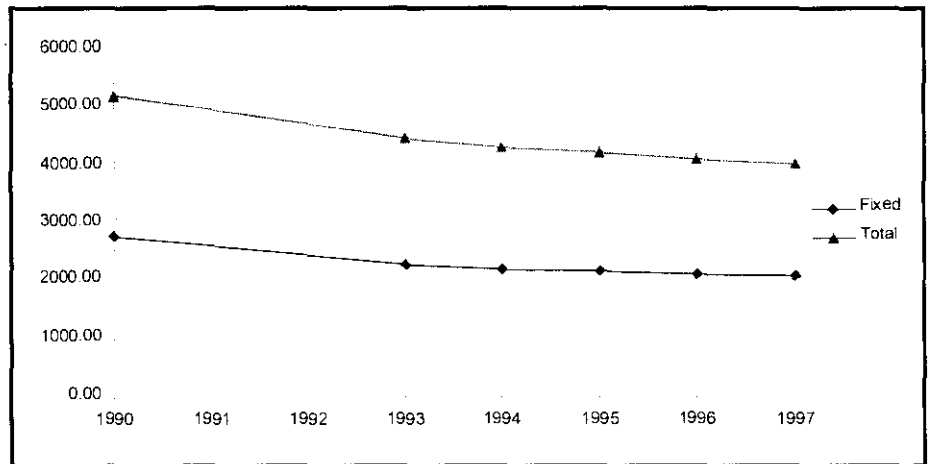
⁶⁰ Price deflators are based on price indices of private consumption for each EU Member State (Source: Eurostat).

Austria: Standard Tariff
Real price development
 (annual user payments in national currency including value added tax)

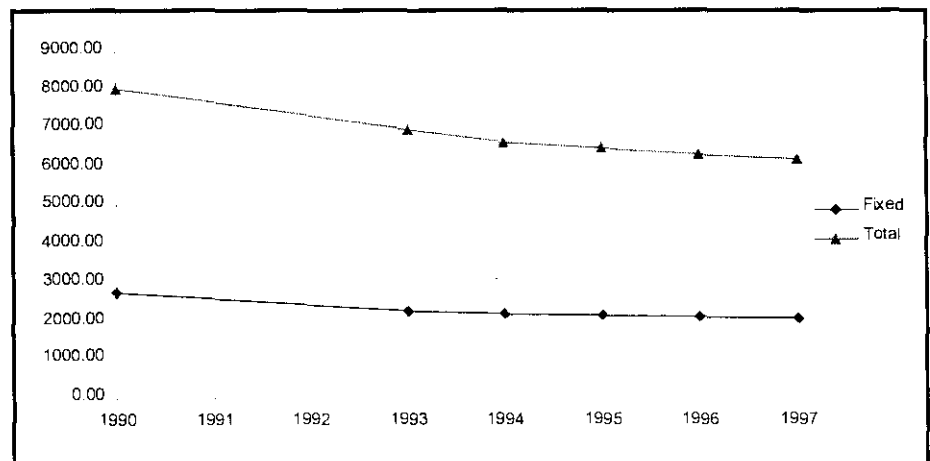
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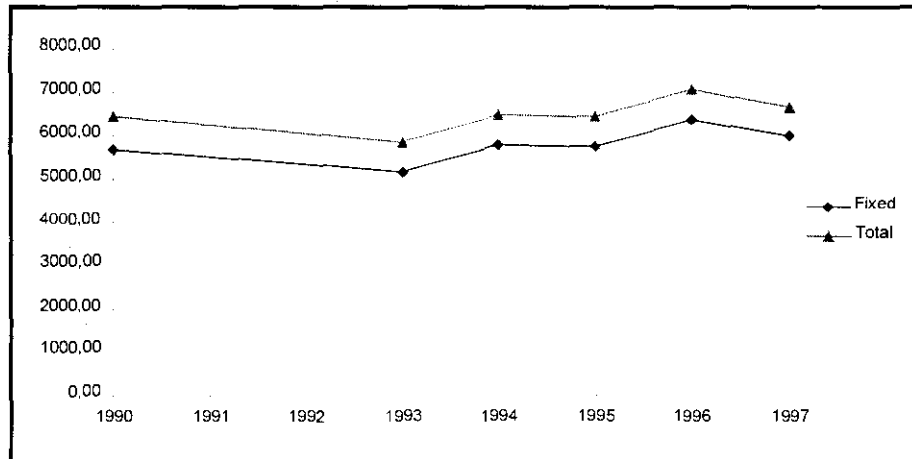
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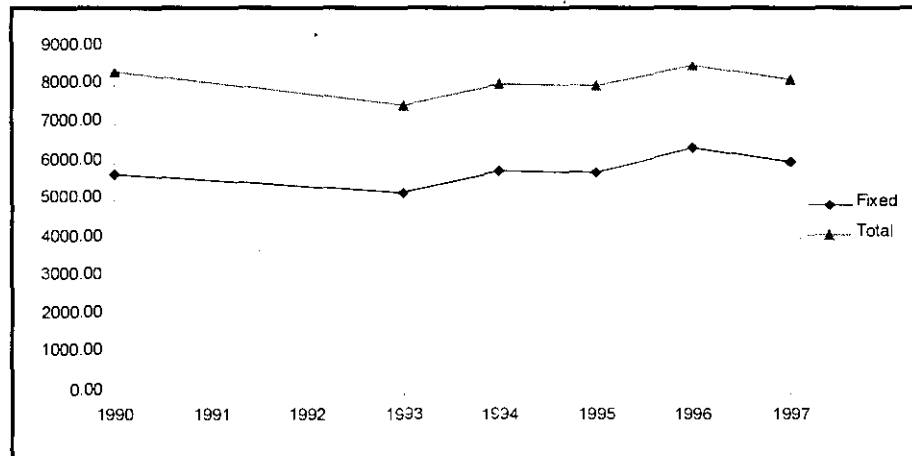
Belgium: Standard Tariff

Real price development
(annual user payment in national currency including value added tax)

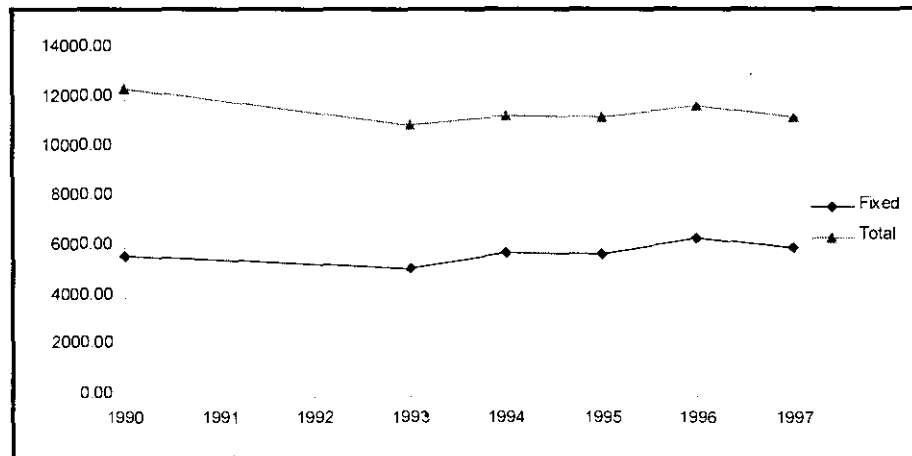
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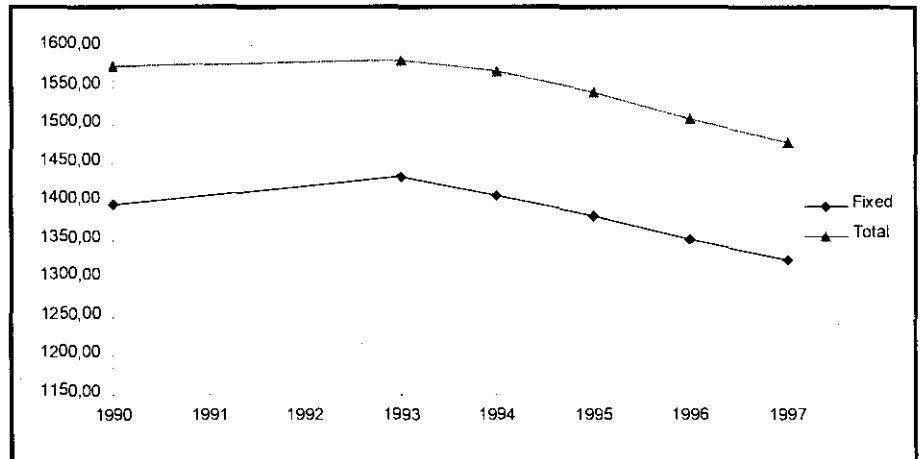
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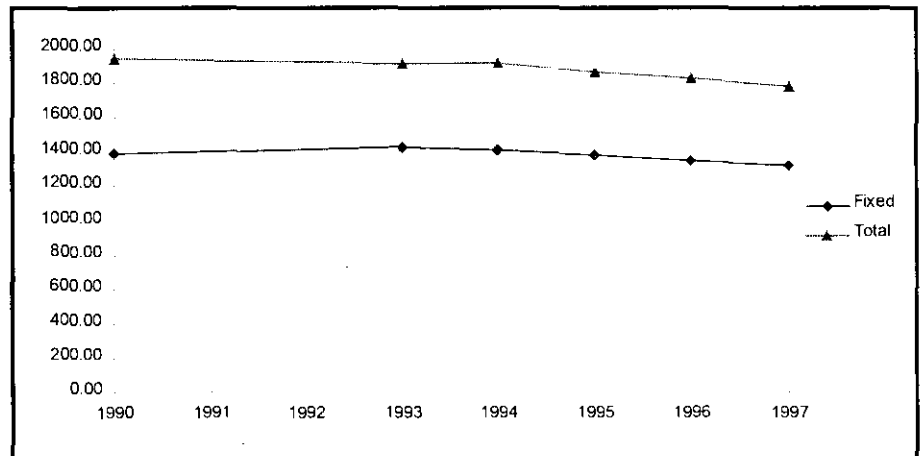
Denmark: Standard Tariff

Real price development
(annual user payment in national currency including value added tax)

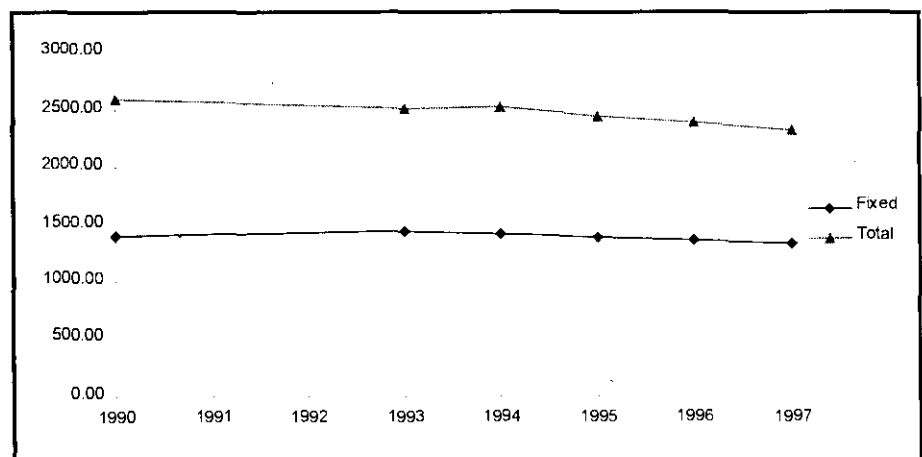
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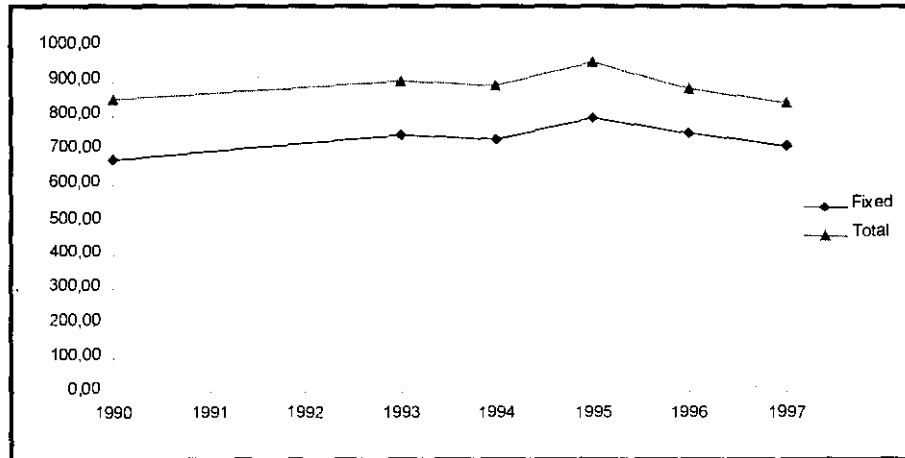
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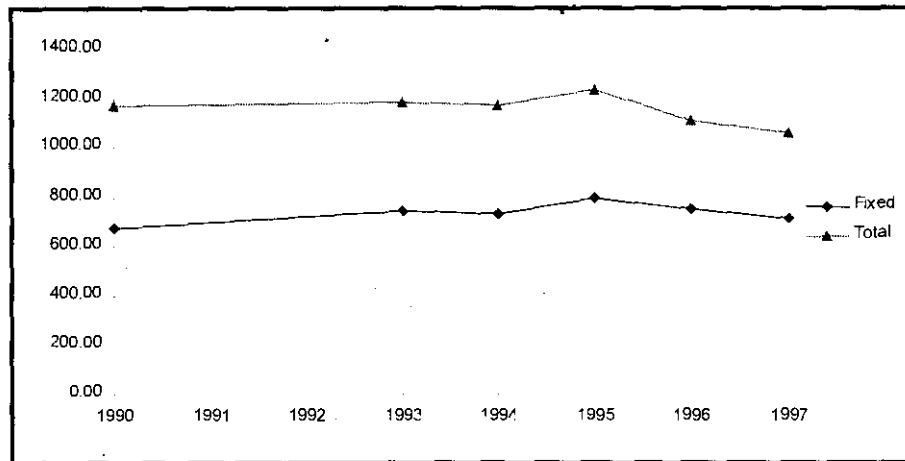
Finland: Standard Tariff

Real price development
(annual user payment in national currency including value added tax)

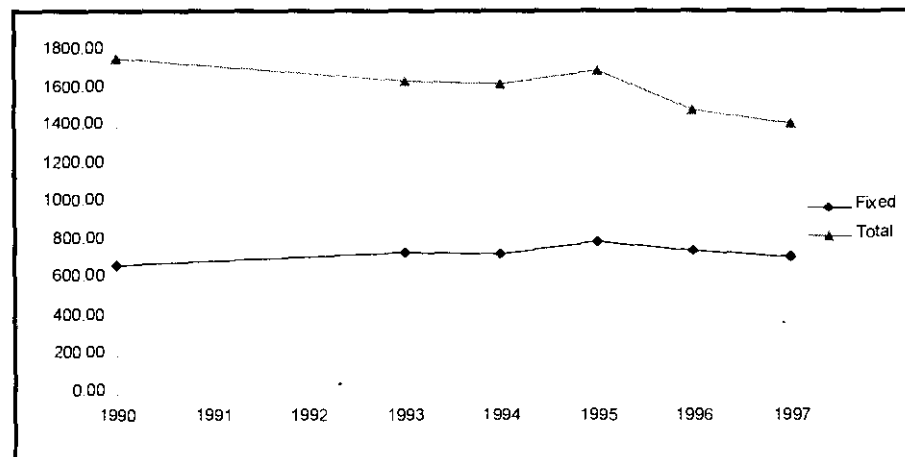
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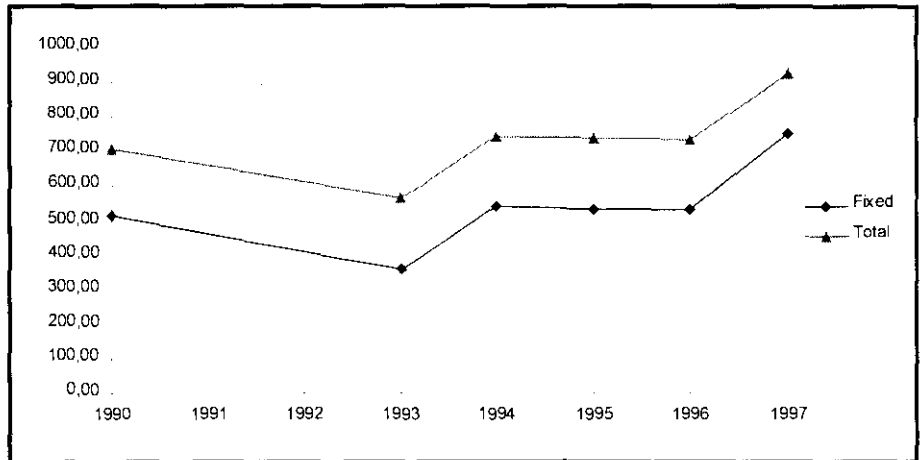


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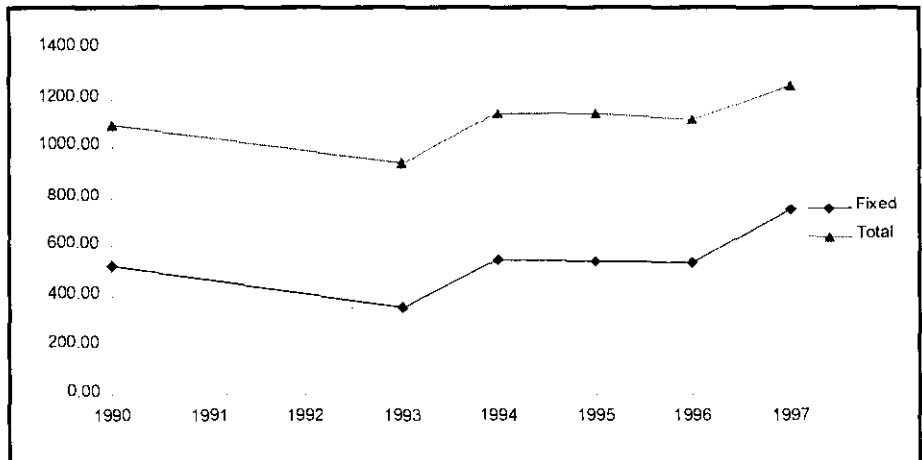


France: Standard Tariff
Real price development
 (annual user payment in national currency including value added tax)

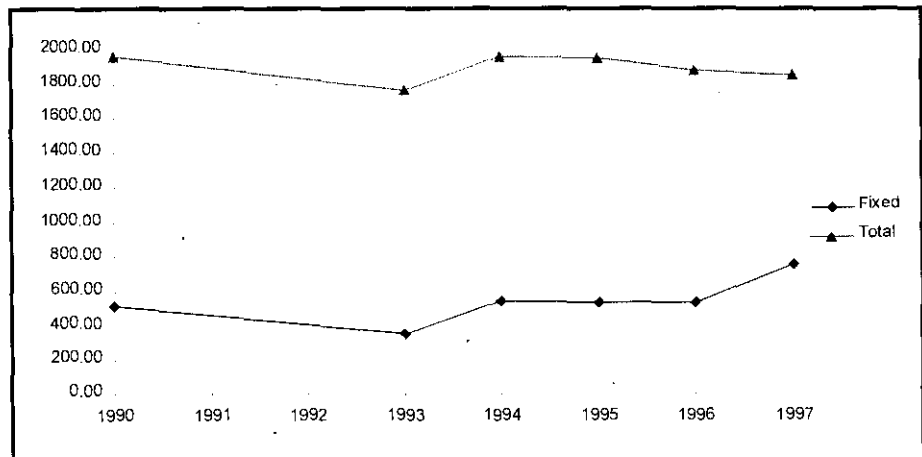
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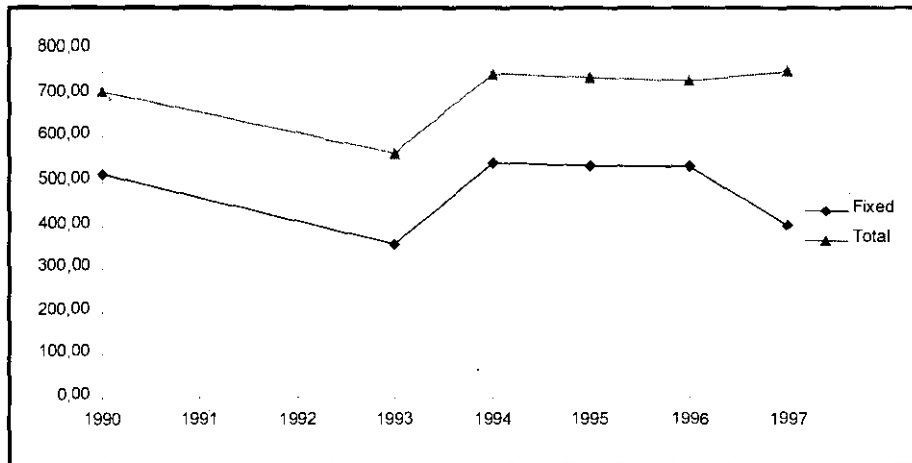


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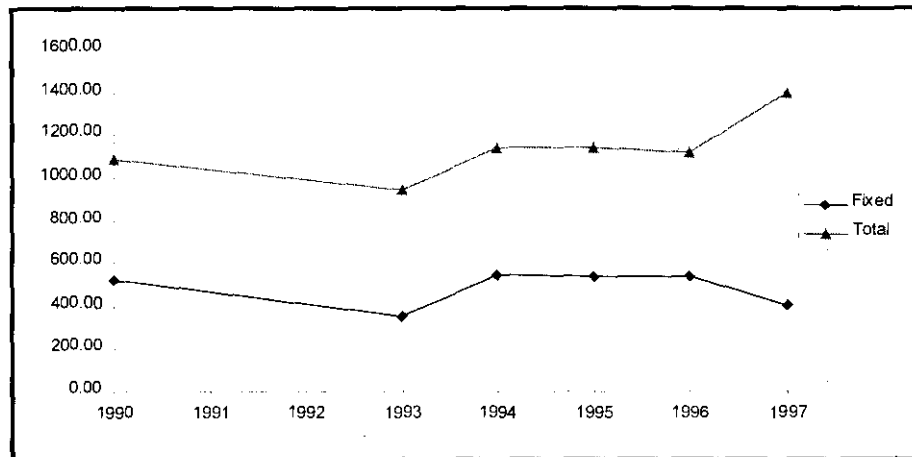
France: Low User Tariff ⁶¹

Real price development
(annual user payment in national currency including value added tax)

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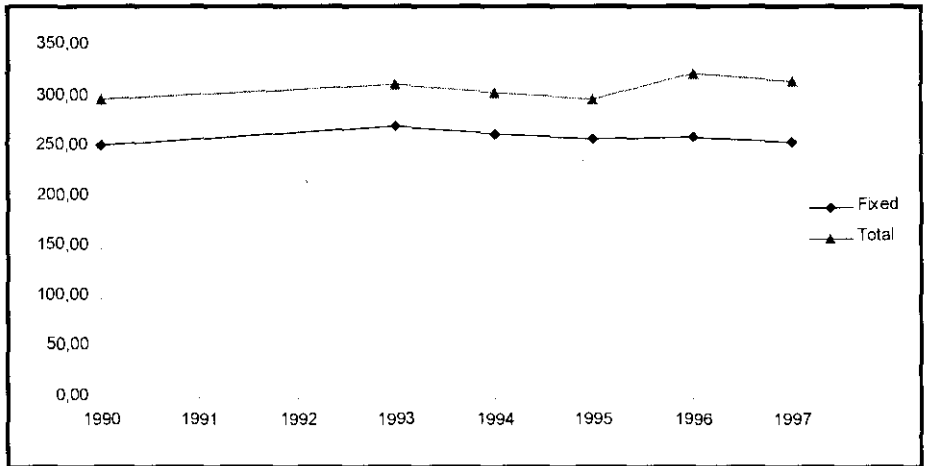
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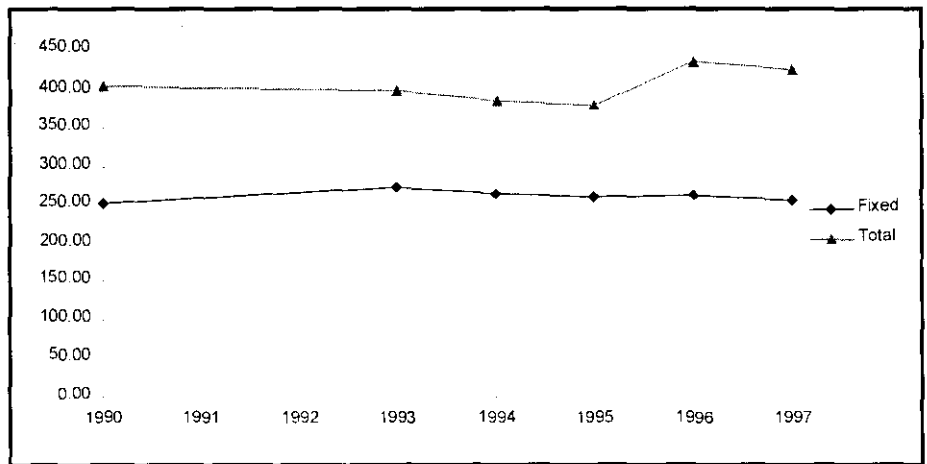
⁶¹ The "Abonnement Modèrè" tariff scheme for users with monthly bills below 204 Franc. France Telecom has also an automatic scheme for users with call costs below 9.225 Franc per two months. This gives a lower fixed (rental) charge.

Germany: Standard Tariff
Real price development
 (annual user payment in national currency including value added tax)

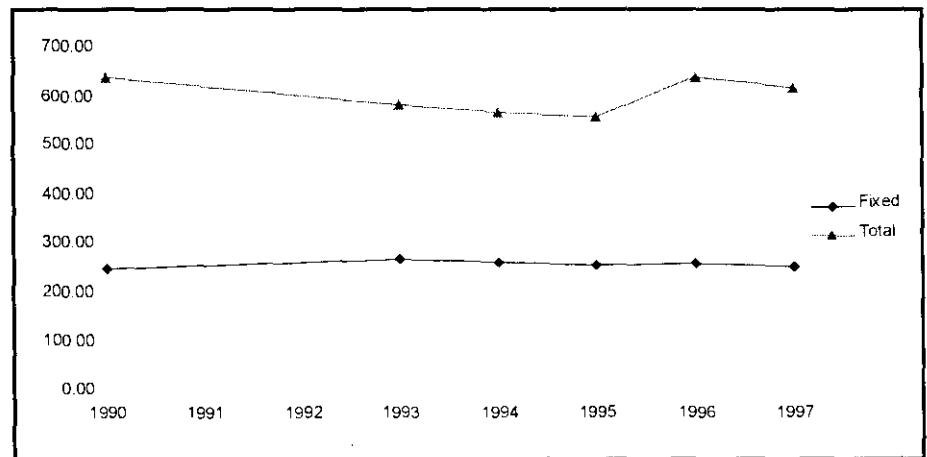
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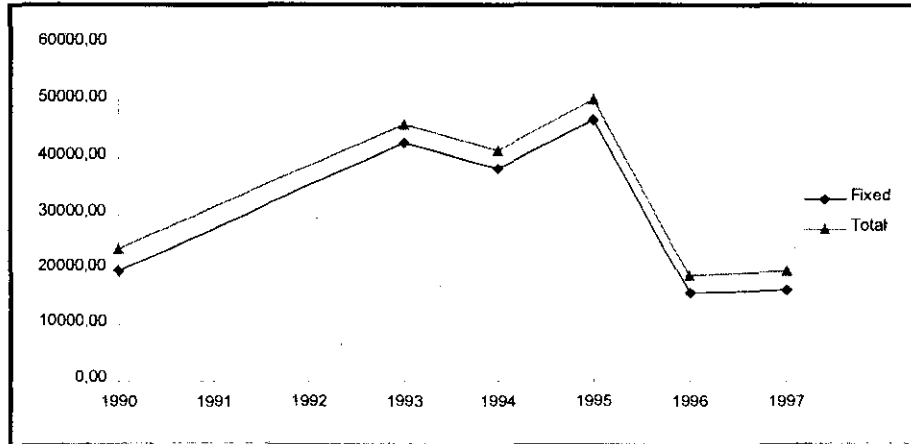
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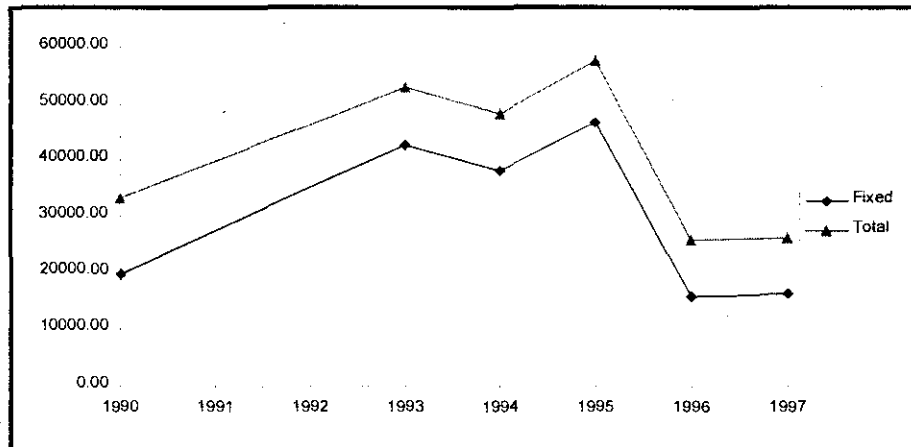
Greece: Standard Tariff

Real price development
(annual user payment in national currency including value added tax)

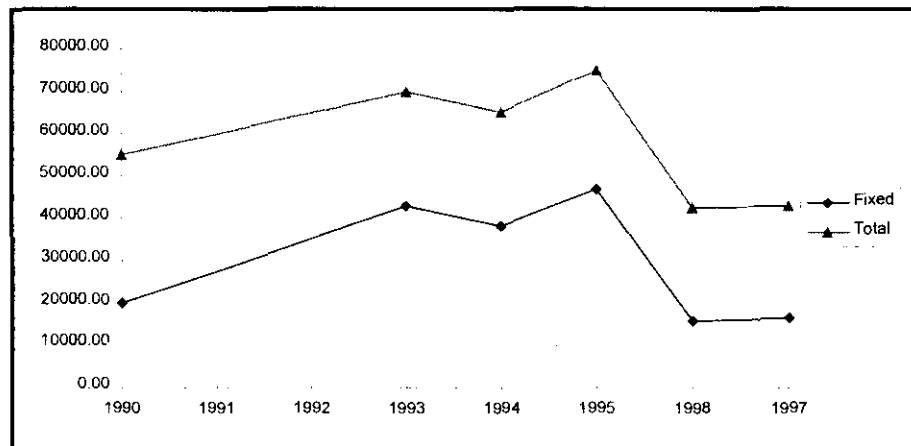
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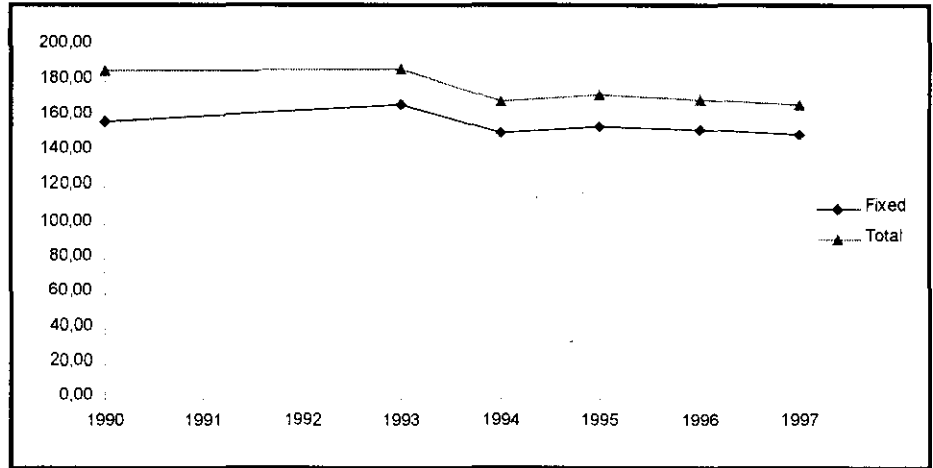


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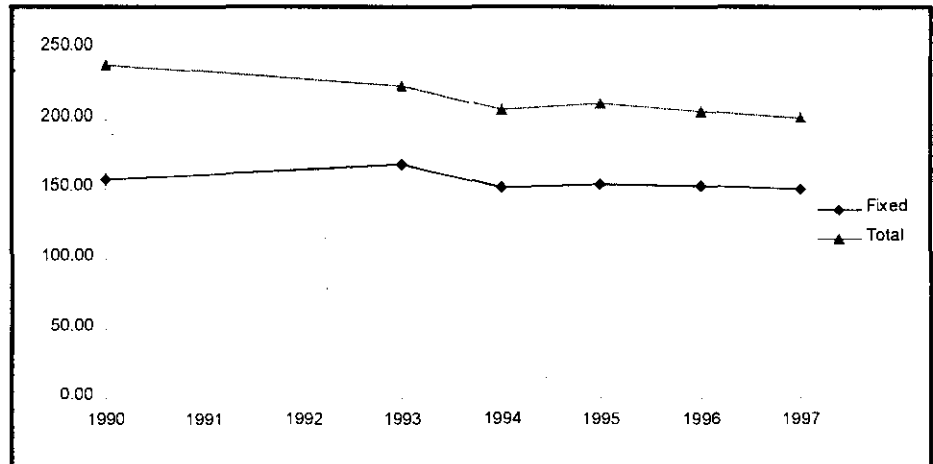


Ireland: Standard Tariff
Real price development
 (annual user payment in national currency including value added tax)

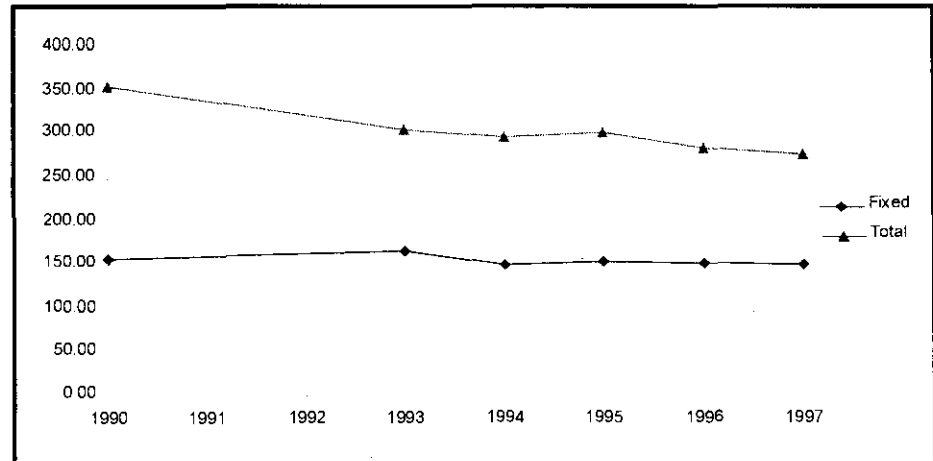
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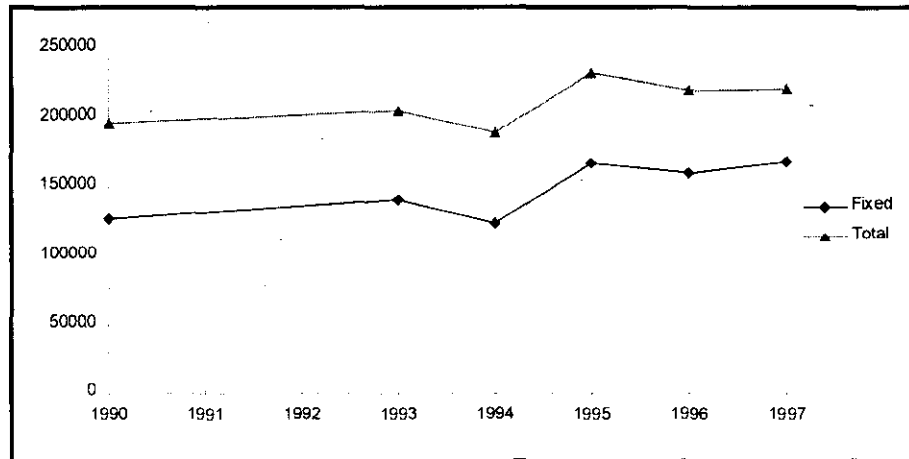
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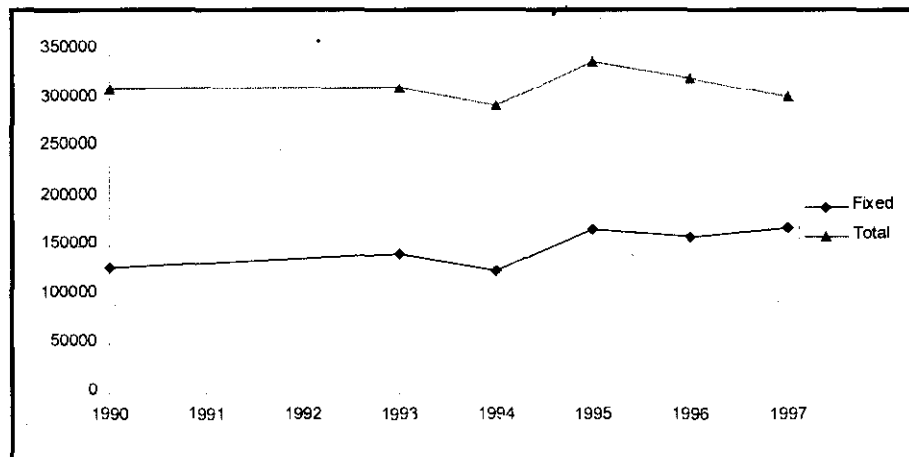
Italy: Standard Tariff

Real price development
(annual user payment in national currency including value added tax)

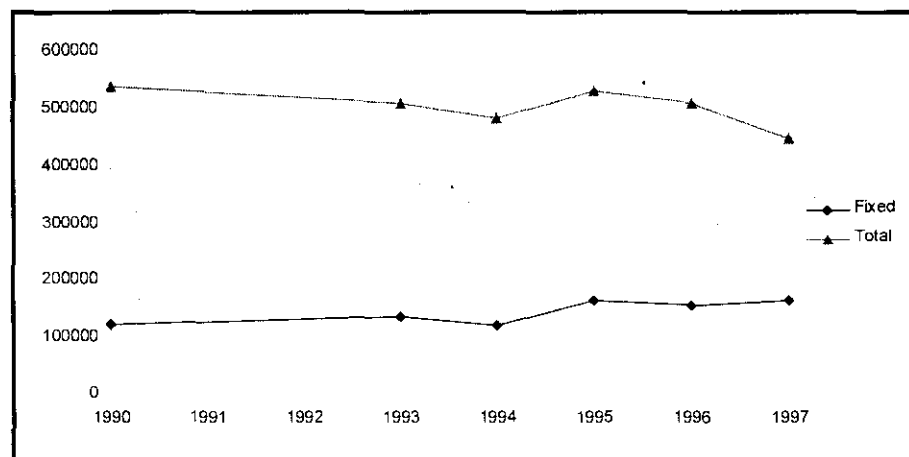
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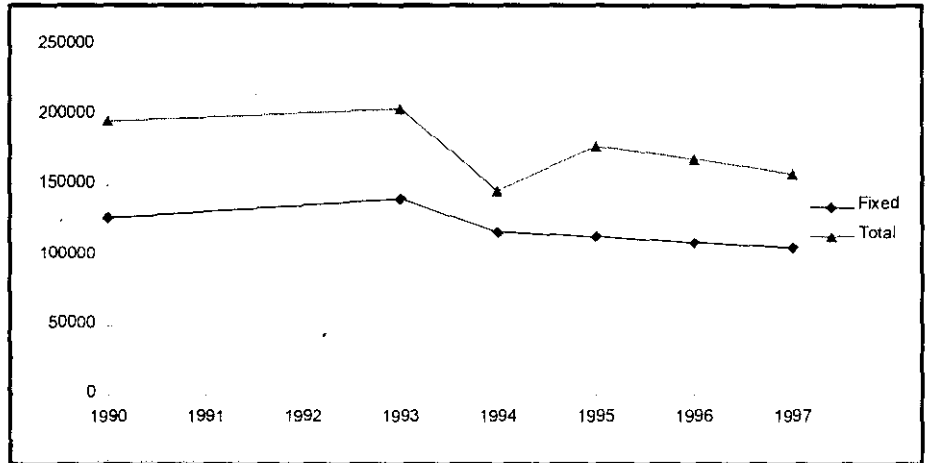


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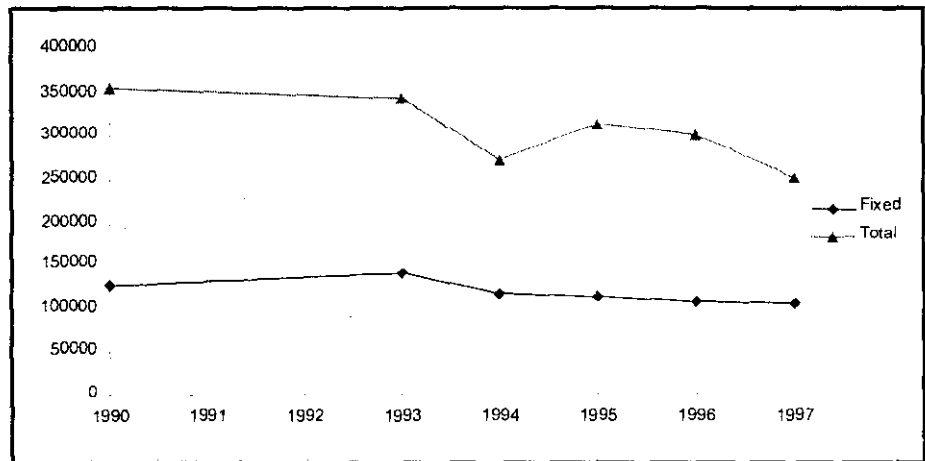


Italy: Low User Tariff ⁶²
Real price development
 (annual user payment in national currency including value added tax)

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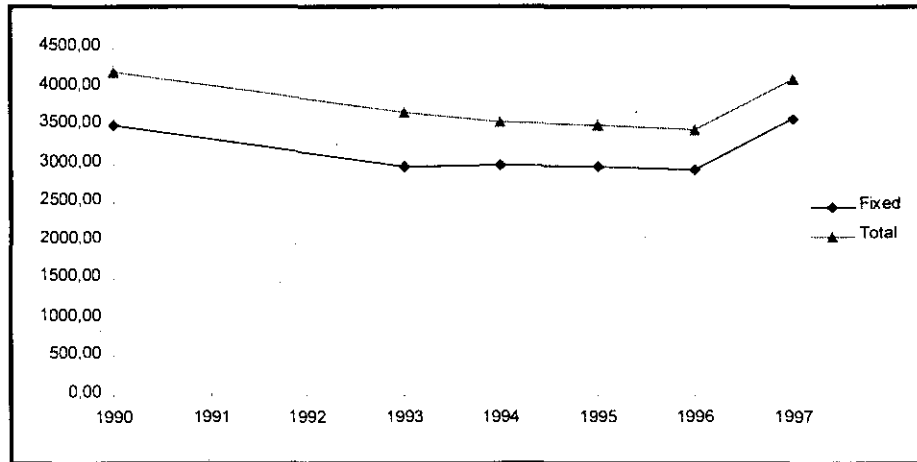


⁶² The scheme was introduced in 1994. The scheme has currently two thresholds: Below 50 units per month, the unit price is 50 Lire (+ VAT). Between 50 and 110 units per month, the unit price is 346 Lire (+ VAT). Above this threshold the unit price is 127 Lire (+ VAT). The rental charge is reduced to 8300 Lire per month.

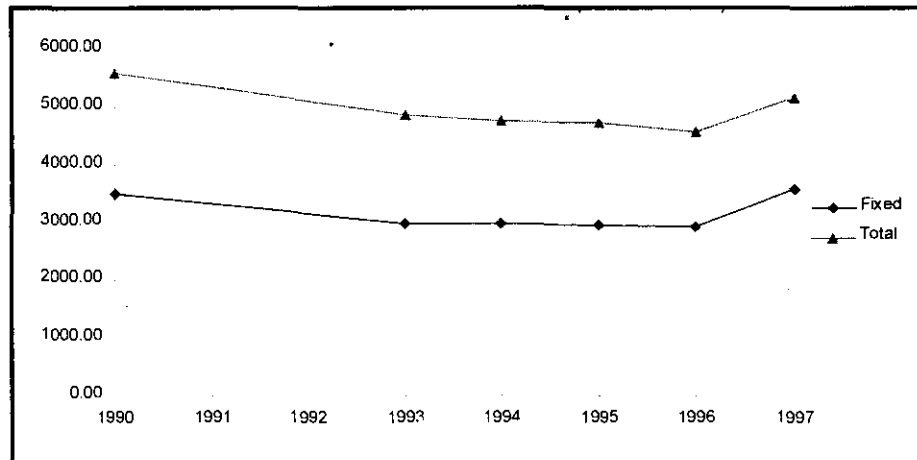
Luxembourg: Standard Tariff

Real price development
(annual user payment in national currency including value added tax)

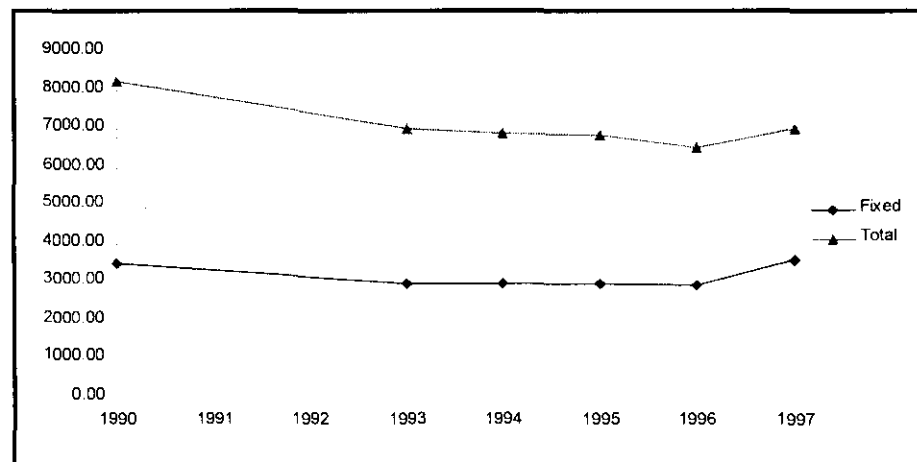
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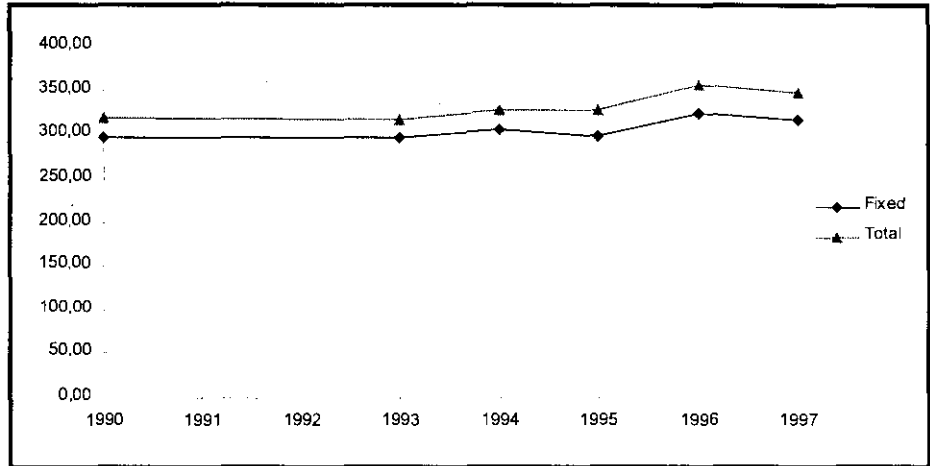


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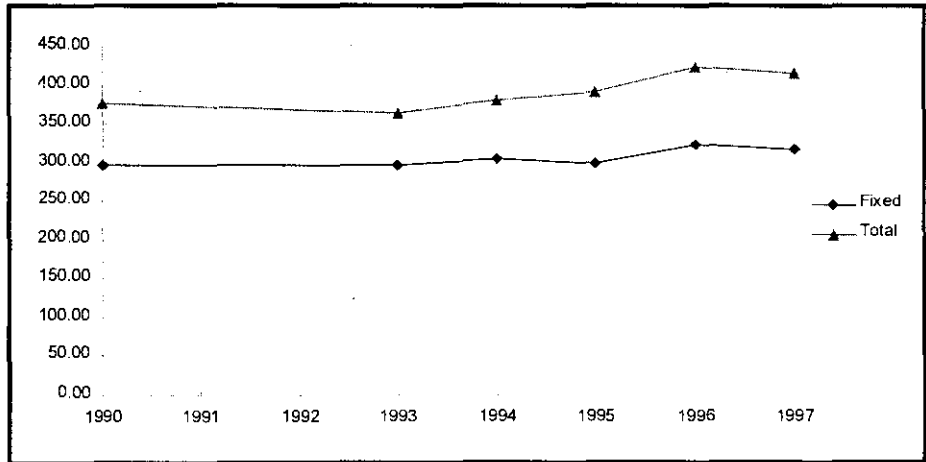


Netherlands: Standard Tariff
Real price development
 (annual user payment in national currency including value added tax)

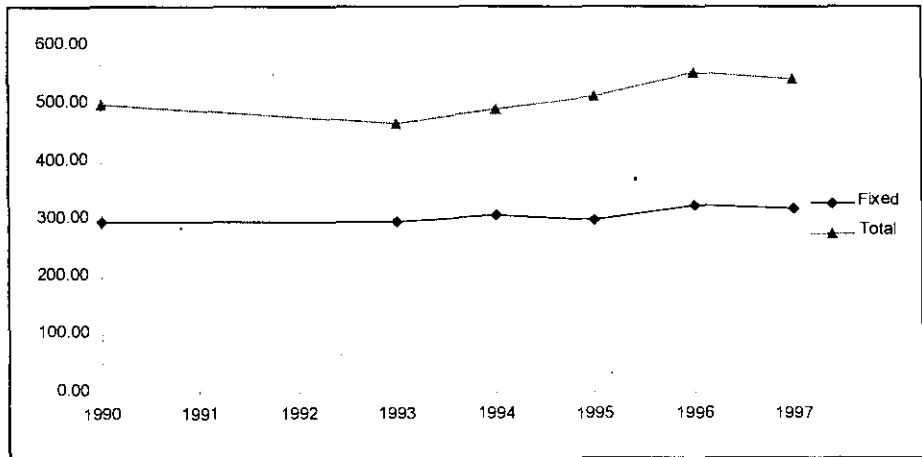
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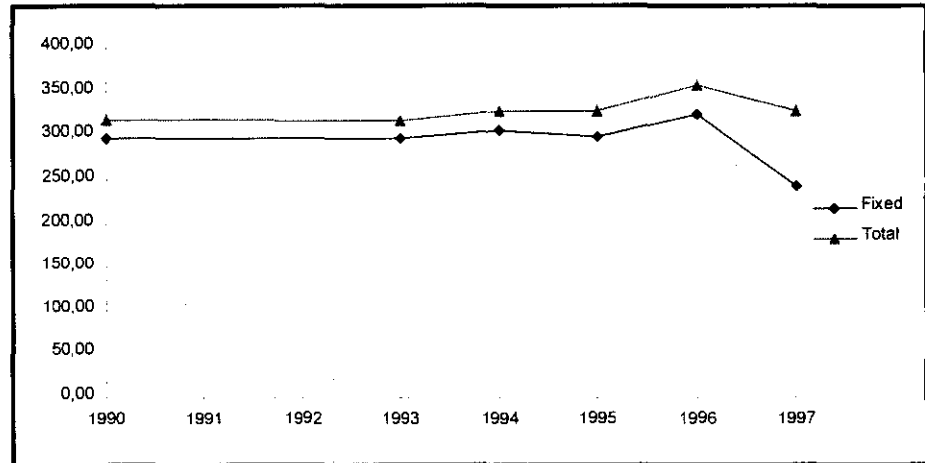
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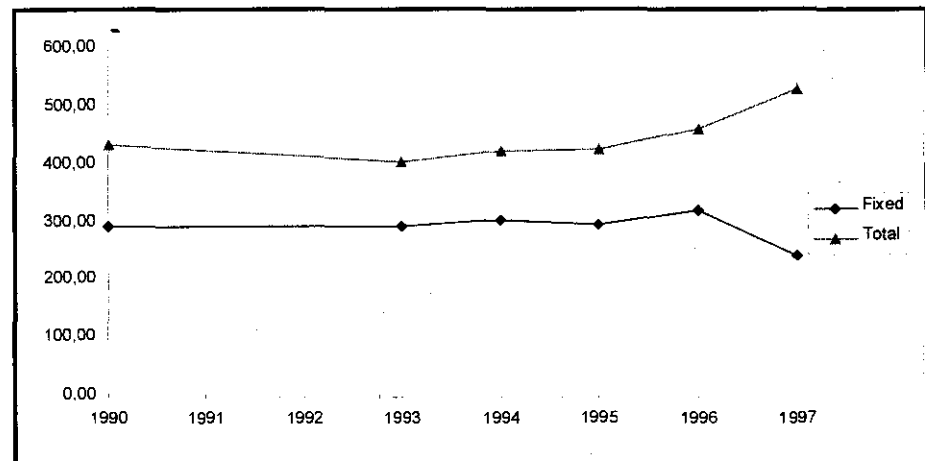
Netherlands: Low User Tariff ⁶³

Real price development
(annual user payment in national currency including value added tax)

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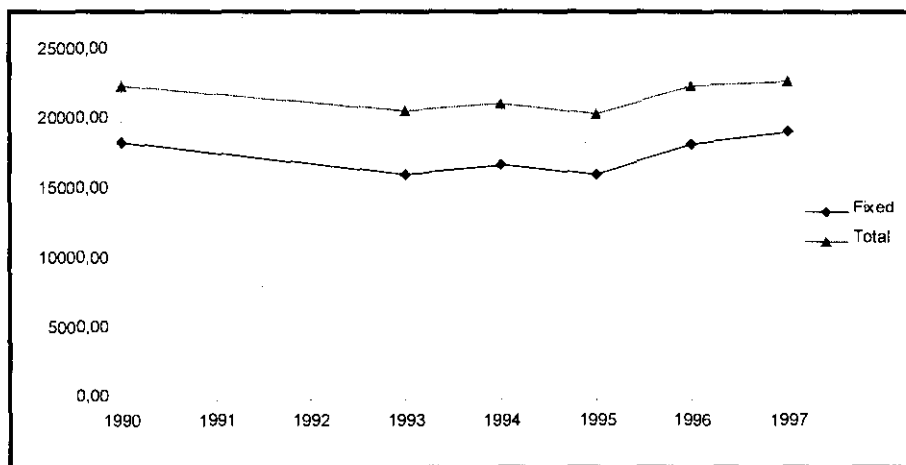


⁶³ The BelBudget scheme was introduced in 1997, and offers a lower rental charge against call charges 3 times the normal (BelBasis) charges, for national and international calls.

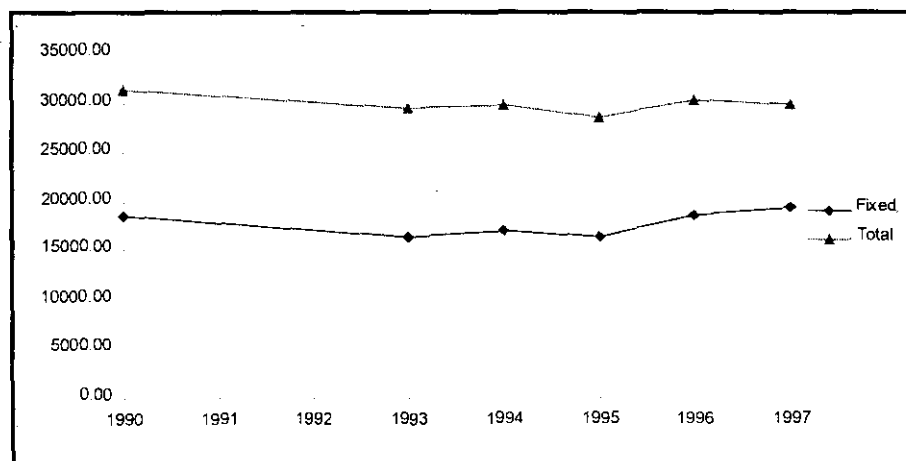
Portugal: Standard Tariff

Real price development
(annual user payment in national currency including value added tax)

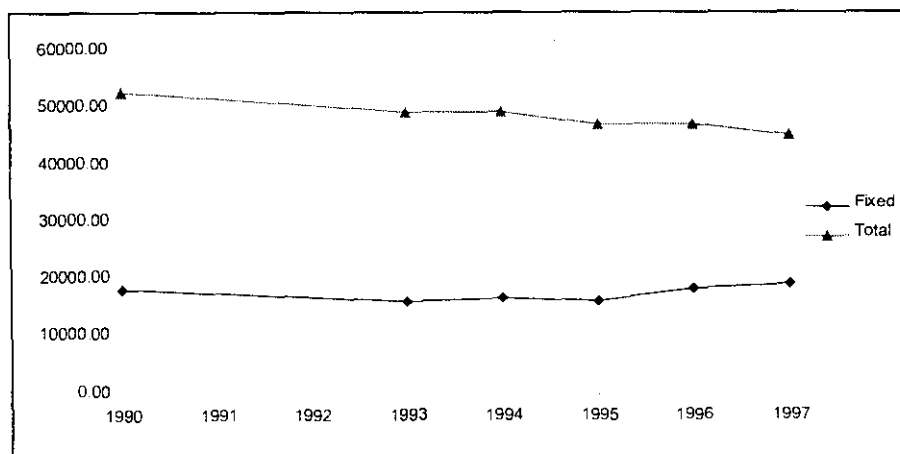
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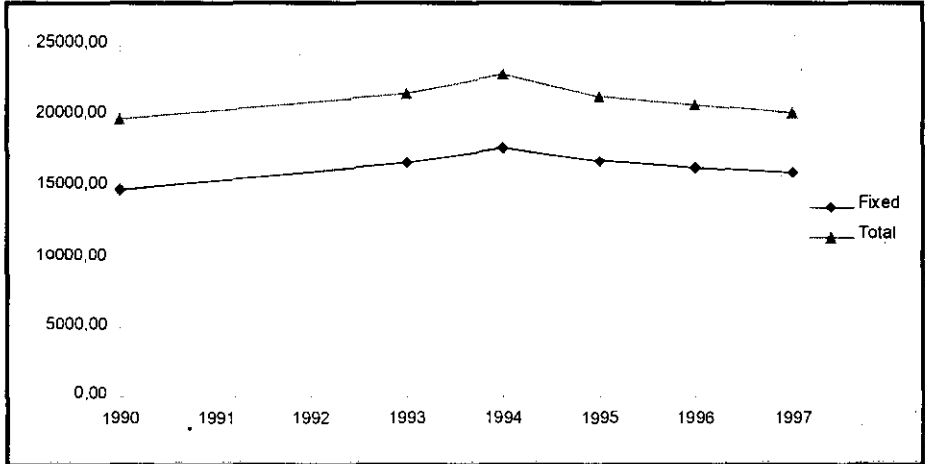


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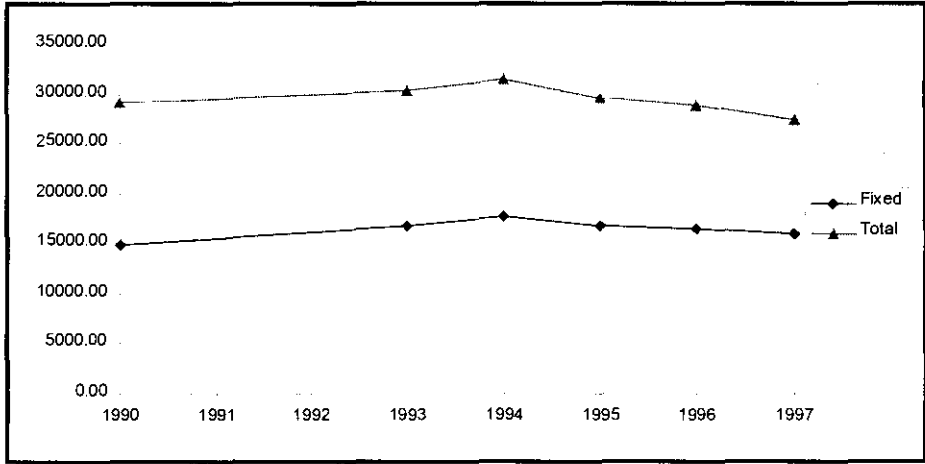


Spain: Standard Tariff
Real price development
 (annual user payment in national currency including value added tax)

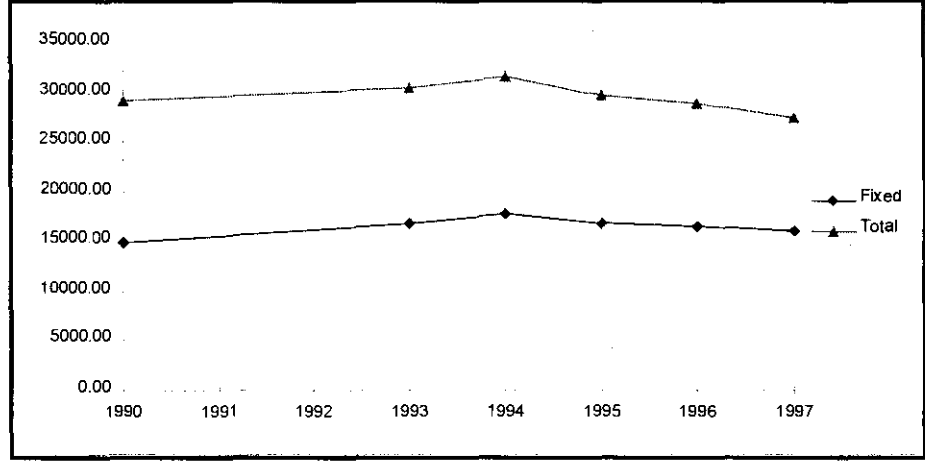
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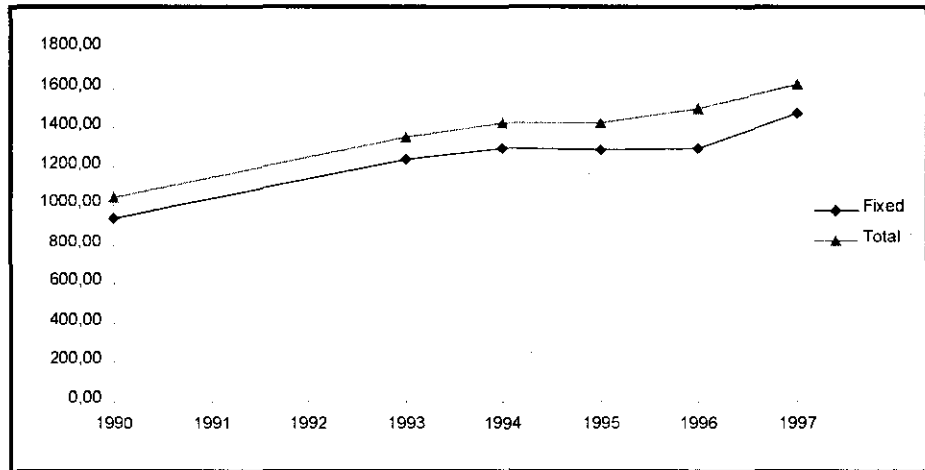
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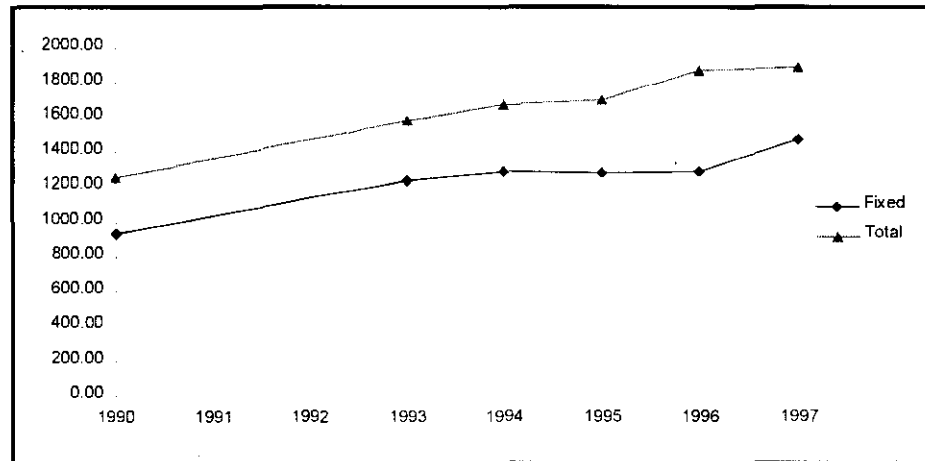
Sweden: Standard Tariff

Real price development
(annual user payment in national currency including value added tax)

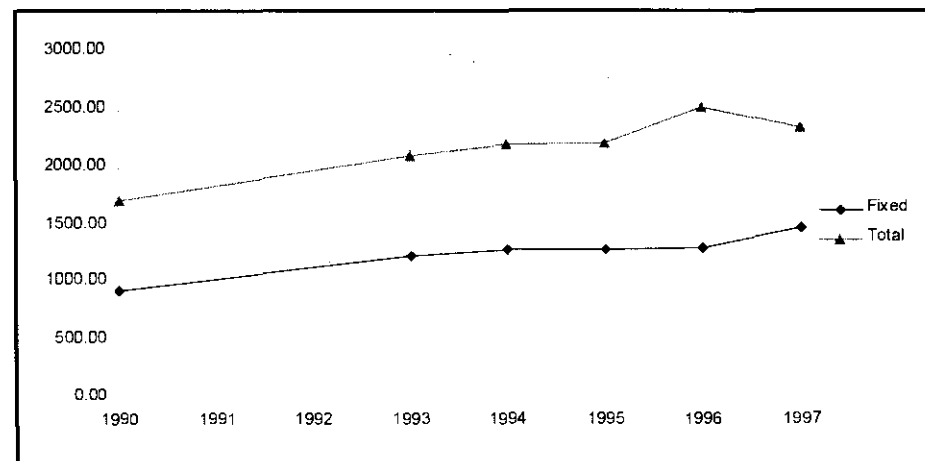
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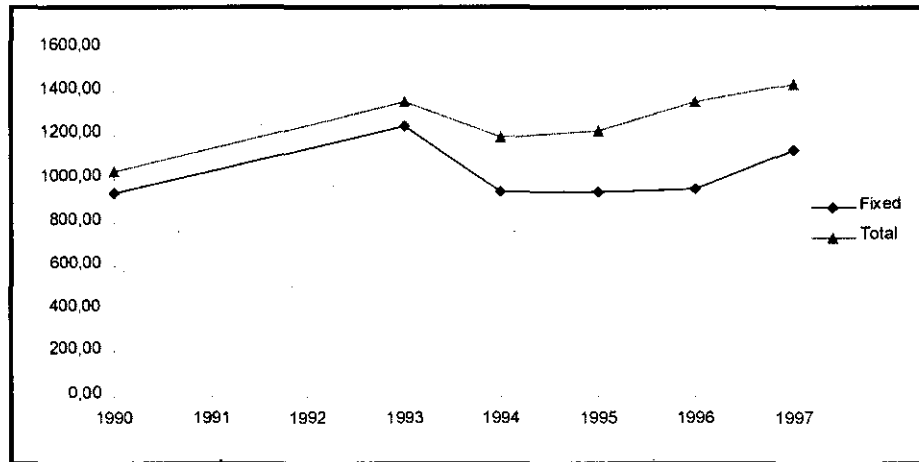
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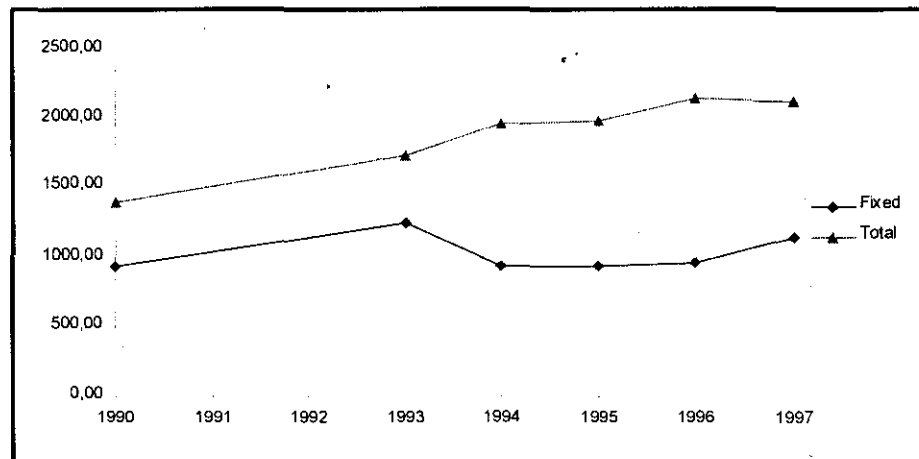
Sweden (Telia): Low User Tariff ⁶⁴

Real price development
(annual user payment in national currency including value added tax)

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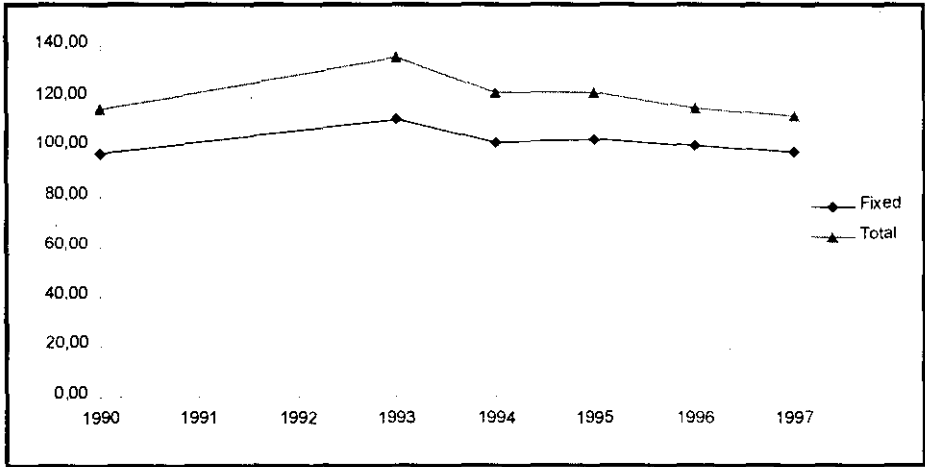
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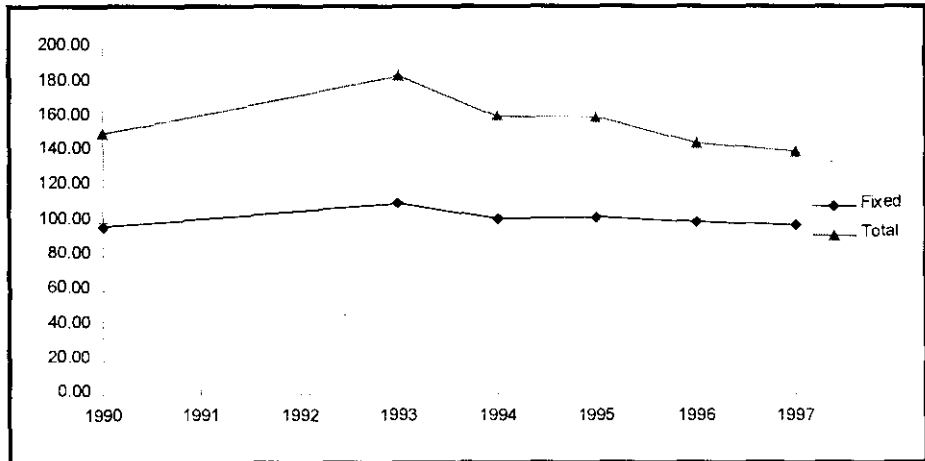
⁶⁴ Telia Mini is a service for customers calling for less than SEK 100 per quarter. It offers a rental per quarter at SEK 100 below the standard rental, but with double call charges (including call

United Kingdom (BT): Standard Tariff
Real price development
 (annual user payment in national currency including value added tax)

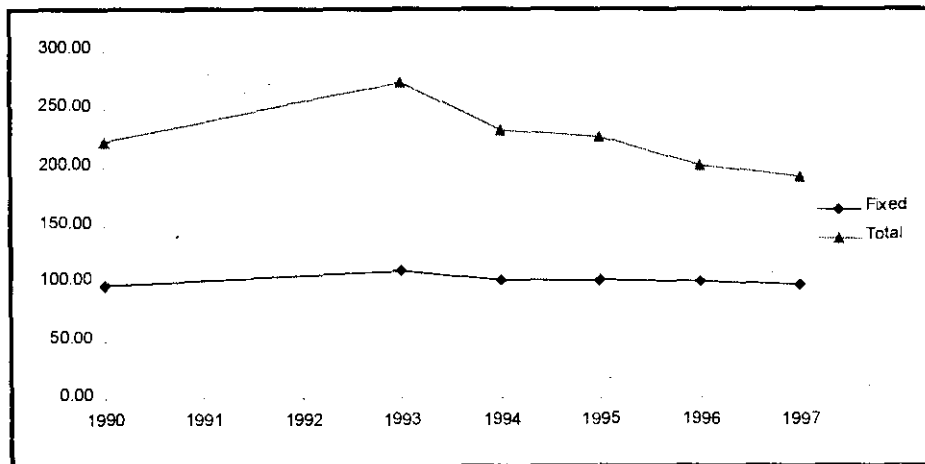
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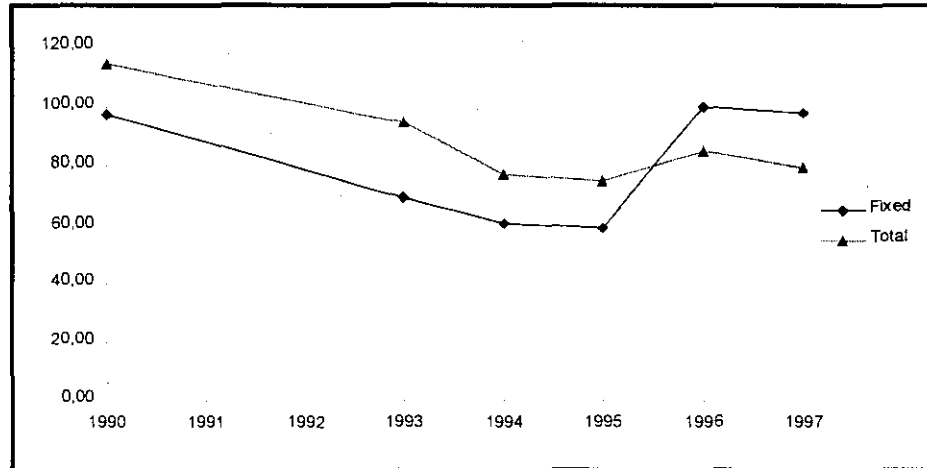
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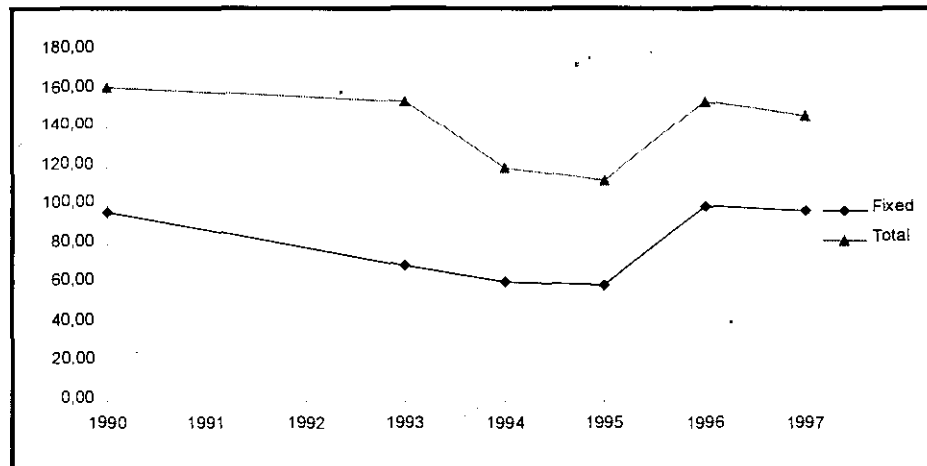
United Kingdom (BT): Low User Tariff ⁶⁵

Real price development
(annual user payment in national currency including value added tax)

10% user



25% user



⁶⁵ The "Low user" scheme was introduced in 1996, effectively replacing the "Supportline" option. The Low user scheme offers a discount on the rental charge for usage below a certain threshold. The discount is larger than the usage charge it is calculated from. This explains the somewhat strange graph showing effectively negative usage costs.

ANNEX III

Monitoring Survey on Internet Use and Access

ACCESS TO ADVANCED SERVICES

Use of Advanced Services including Internet

The major development since publication of the Communication of March 1996 has been the dramatic increase in Internet usage. The number of Internet hosts in European countries has risen to about 5 million⁶⁶ during 1997 representing an annual growth rate of about 50%. The total number of users is difficult to monitor except via survey means. National responses to the Commission's questionnaire, where information is available, are given in Table 1 of Annex III.

It is also difficult to give a clear picture of the actual use of these services (e.g. email, data communications and file transfer, multimedia communications etc.). In most cases it is the consumer or user who defines the services being exploited, via the terminal equipment employed, in contrast to the case where a specific service is provided. However, indications from Commission surveys are that World Wide Web usage now constitutes over half of Internet traffic handled by European Internet Service Providers, while email still forms about a quarter of traffic.

In the absence of systematic and comparable information on subscribers or users, the main pointers to the levels and rate of development of Internet related services are indicators such as PC penetration and use in business and in the home, the growth of Internet hosts and the number of public Webpages. These indicators are given in Table 2 of Annex III. There is evidence of quite wide variations within the European Union, in particular with respect to the Internet indicators concerning Internet hosts and Webpages.

A range of potential barriers to Internet development and usage exist both for businesses and private consumers. The high price of leased lines or dedicated circuits makes it costly both for businesses to link to the Internet and for Internet Service Providers to develop their networks and provide cost effective services. The cost of usage in the case of dial-up service may be a deterrent for private consumers unless Internet friendly tariff packages are available. On the other hand, the prospect of telecommunications competition can reduce and remove these barriers and stimulate development. For instance the prospect of competitive access provision to Internet by cable operators will put pressure on prices and offer an alternative flat rate tariff approach.

Internet for Schools and telecommunications policy

General indications are that between about 15% and 60% (depending on the type of school and Member State concerned) of schools are now connected to Internet and that the numbers are growing fast. Details are given in Tables 3 and 4 of Annex III.

Improved Internet access and usage for schools comprises a wide range of issues. Initiatives and actions launched in Member States cover access to Internet, the costs of communications, equipment, training and pedagogical questions, and the development of educational content.

A wide range of initiatives are already underway and continue to develop at a Community level in the context of the action plan "Learning in the Information Society".

With respect to telecommunications needs, there is evidence that (some) schools are discouraged from access and using Internet, or using it more or increasing the capacity of their connections because of high prices and because of the problem of predicting and controlling expenditure (because of usage charges for which it is difficult to budget). Public policy therefore should be about helping

⁶⁶ This total includes about 10% of the generic .com hosts which are estimated to be European Union based.

to ensure that access and usage levels by schools continue to grow and removing impediments that might prevent them being able to do so.

The current options for schools to link to Internet are by dial-up PSTN lines, dial-up ISDN (or multiples of 64 kbits/sec) or dedicated access, (64 kbits/sec and beyond) including the possibilities offered by public frame relay services. In the future, other options will become available based on technologies which are ready to be deployed.

Dedicated access offers a predictable fixed annual cost for schools. However, there are still significant discrepancies of prices between Member States. Including all relevant equipment and ISP costs, annual prices may range from less than 5000 ecu to as much as 5 times this amount.

Internet access via PSTN or ISDN potentially offers a cheaper alternative. However, when the usage costs are included (usually at peak rate for school usage), the annual cost (including relevant ISP related costs) can be as high as 8000 ecu per year.

Fortunately the story does not end here. A PSTN or an ISDN line which is connected for ten hours of the day does not represent a cost as high as or equivalent to the total of all the tariffed fixed and usage elements which are based typically on a network handling switched telephone traffic. Moreover, if schools were to be defined as a specific user group and paid only the price which covered their long run incremental costs (and a rate of return), a viable tariff could be much lower.

The example of the UK provides some indicative cost and price levels when special tariff packages are permitted by regulatory authorities or emerge from competitive rivalry between operators. In order to allow the dominant operator BT to offer a special flat-rate or fixed tariff package for schools, Oftel (the national regulatory authority) set cost floors below which BT would not be permitted to tariff services. This has led to BT in October 1997 announcing new fixed fee discounted tariffs for schools⁶⁷. At the same time, cable companies in the UK have responded by offering even lower priced tariffs to schools for Internet access and usage⁶⁸.

It is difficult to estimate what equivalent incremental cost based tariffs (or tariffs which would emerge on the basis of competitive rivalry between incumbent and new local operators) in other member states might be. Costs depend on local loop costs as well as switching and transport costs and the former can vary significantly. They may be both lower and higher than the average for the UK. Nevertheless it is conceivable that cost based tariffs could be provided to schools for no more than a flat rate of 1000 ecu and 1500 ecu per year respectively for PSTN and ISDN access and usage, or around a fifth of current levels in most of the Union.

The above illustration shows that genuine telecommunications competition will vastly improve the situation faced by schools. It will both lower prices and lead to flat rate or fixed offerings. If prices were to drop to a fifth, all schools could conceivably access and use Internet, and schools currently connected could upgrade their connections.

Given that competition is only beginning to emerge in many Member States, how can the special telecommunications requirements of schools be satisfied? There are three parts to the solution.

⁶⁷ In the case where schools also use BT as the Internet Service Provider (ISP), they pay an annual fee of £445 (670 ecu) for PSTN access and usage and £790 (1185 ecu) for ISDN access and usage. If schools use another or a separate ISP, they pay BT an annual fee of £300 for PSTN access and usage (call origination) and £500 for ISDN access and usage (call origination).

⁶⁸ Internet access and usage via a 64 kbit/sec ISDN link is tariffed at a flat rate of £600 (900 ecu) per year whilst PSTN access and usage is tariffed according to school size (number of pupils). Schools with less than 250 pupils pay £100 (150 ecu) per annum for access and unlimited usage. £250 for schools with 251-500 pupils, and schools with over 500 pupils pay a flat rate £500 (750 ecu) per annum.

First effectively exploit the benefits of competition for schools as soon as it emerges. Schools constitute a specific group of users with respect to access to Internet. Special (discounted) tariffs can be offered which cater for their particular needs, which are commercially viable and which do not distort the implementation of effective telecommunications competition throughout the European Union. In particular, competing entrants should be permitted and encouraged to offer special tariffs to schools irrespective of their coverage.

Second, national regulatory authorities should encourage and permit incumbent or dominant operators to offer special flat rate (annual) tariffs to schools, in advance of effective competition. This will involve certain practical steps for example to define the special category and to ensure that operators do not abuse their dominant position.

Third, Member States in undertaking other financial measures in support of schools etc., (for example investments in new networks or other budgetary assistance) should ensure that competitive developments (which are necessary to bring down prices and encourage innovative solutions) are not undermined.

Table 1: Internet Usage Penetration by Category

(Source: National replies to 1997 Commission questionnaire)

Country	Business users	Educational users	Residential users
B	overall total of 300.000 estimated users (not available by type of user)		n/a
DK	48% ⁶⁹ of enterprises with more than 5 employees have Internet access.	100% of upper secondary schools have access to the Internet. 63% ⁷⁰ of primary and lower secondary schools have access to external electronic communication.	12% ⁷¹ of households have access to the Internet.
D	n/a	4,000,000 - 10,000,000 ⁷²	n/a
EL	17,000	44,000	14,000
E	n/a	306,000 ⁷³	n/a
F ⁷⁴	180,000	90,000	180,000
IRL	n/a	n/a	n/a
I	n/a	n/a	n/a
L	1,300 ⁷⁵	n/a	n/a
NL	n/a	n/a	n/a
AUT	total of about 450,000 Internet users of which 200,000 business	112,000 at universities about 1000 at schools	about 150,000 (4.8% of households)
P	240,000	204,000	120,000 ⁷⁶
FIN	250,000 - 300,000 ⁷⁷	n/a	n/a
SWE	approx. 714,000 employees at 65,000 companies have access to the Internet ⁷⁸	n/a	approx. 800,000 households (19% of the total number) had access to the Internet in December 1997.
UK	35% ⁷⁹	n/a	7% ⁸⁰

⁶⁹ 1997 survey data

⁷⁰ 1996 survey data

⁷¹ August 1997 survey data

⁷² Total number of users (3m use the German research net, 2.2 mio use online services like T-online, AOL, Compuserve)

⁷³ Total number of users

⁷⁴ Total number of connections, additionally, there are 60,000 connections in Cybercafes and other private institutions; at the end of 1997, the number of internet users is estimated to amount to 1 mio, PC penetration: 20% of households.

⁷⁵ Total number of users

⁷⁶ 78,000 users have access at other places

⁷⁷ Total number of internet users

⁷⁸ Total number of subscriptions in May 1997. The total number of Swedes who have access to Internet amounts to 1 mio.

⁷⁹ Source: Spectrum ICT survey of businesses 1997 by NOP research group

⁸⁰ Source: Spectrum ICT survey of businesses 1997 by NOP research group

Table 2: Internet Growth Indicators

(Source: Eurobarometer survey and study by Databank Consulting)

Country	Proportion PCs Business	proportion PCs Residential	Internet hosts per 1000 population (July 1997)	Web pages per 1000 population (July 1997, estimated)
	Source: Eurobarometer February 1997		Source: Databank Consulting, 1997	
B	32.4	25.3	8.4	70.6
DK	66.1	49.6	25.9	113.0
D	40.3	26.8	10.7	61.9
EL	22.1	14.1	1.9	21.4
E	31.9	24.1	3.1	23.0
F	38.2	19.6	5.0	34.4
IRL	31.7	21.1	9.1	64.0
I	41.4	25.4	3.7	50.0
L	47.2	36.1	9.1	115.4
NL	71.0	53.5	21.9	100.2
AUT	52.8	28.1	10.8	72.0
P	20.9	13.9	1.8	35.8
FIN	56.2	33.8	65.4	283.1
SWE	69.8	47.8	32.0	201.8
UK	52.0	38.3	14.9	86.9
EU average	42.3	28.3	10.0	62.7

Table 3: Access to Internet for Schools

(Source: National replies to 1997 Commission questionnaire)

Country	No of educational institutions (primary, secondary and others)	Proportion of educational institutions with Internet Access	What are the targets and timescale - if any - for establishing connection of schools to Internet
B	2,500 secondary schools, 260 high schools	n/a	n/a
DK	2326 primary and lower secondary schools 384 upper secondary schools 169 further educational establishments	63% of primary and lower secondary schools 100% of upper secondary schools 100% of further educational establishments	The Sektornet infrastructure is available and the connection of all educational institutions to Internet is underway.
D	44,625	15%	By 2000, 10,000 schools should have access to internet. Equipment, interconnection charges and overhead expenses are sponsored by Deutsche Telekom and the Ministry for Education
EL	5473 primary schools 3380 secondary schools (including both Gymnaseia and Lyceia) figures exclude the (very few) private institutions	40 secondary schools (access was organised by private bodies) All universities have access to Internet (24 out of 32 establishments have 2 Mbs connections, in November 1997 all university networks should be upgraded to 2 Mbs)	The Ministry of Education and Religious Affairs has established six national pilote programmes under the Community Support Framework II for the promotion of internet in secondary schools. By 1999, the number of schools with Internet access is expected to exceed 1,000.
E	32,130 primary schools 8,710 secondary schools	20% of primary schools 68% of secondary schools	The target is to connect all schools to Internet by the year 2001.

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Table 3 (continued) : Access to Internet for Schools.

Country	No of educational institutions (primary, secondary and others)	Proportion of educational institutions with Internet Access	What are the targets and timescale - if any - for establishing connection of schools to Internet
F	60,233 primary schools 11,212 secondary schools	Almost all secondary schools and 1,500 public primary schools have access to internet via Rénater (Réseau national pour la Technologie, l'Enseignement et la Recherche). Additionally, about 1,000 schools have access independently from Rénater)	Till 2,000, all secondary schools and a large number of primary schools should have access to multimedia networks and the internet. This target is now being redefined.
IRL	3,317 primary schools 768 secondary schools	6% of primary schools 55% of secondary schools	The target is to have all schools connected to the Internet by year 2000.
I	n/a	n/a	n/a
L	n/a	Schools have access to the server of the Ministry of Education.	N/a
NL	8,290 primary schools 720 secondary schools 143 schools for adult education 59 schools for higher vocational education 26 universities	n/a	Two targets: 1) A national electronic network (EDU-net) interlinking schools, museums, public libraries, municipalities, community centres and other public institutions 2) local electronic networks for schools, advisory services, multimedia PCs (including management and administration). The goal is to achieve a density of one PC per 10 students (school) and 1 per 3 students (secondary education). The project of the Minister of Education, Culture and Science has been put down in an "Implementation Plan" which will be executed in four steps till 2002.

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Table 3 (continued) : Access to Internet for Schools.

Country	No of educational institutions (primary, secondary and others)	Proportion of educational institutions with Internet Access	What are the targets and timescale - if any - for establishing connection of schools to Internet
AUT	total schools 6212	976 schools or 16% access mostly by phone line	n/a
P	5,388 pre-schools 12,066 basic schools 1,860 secondary schools 272 superior education 285 others	n/a	The Green Paper for Information Society in Portugal recently approved by the Portuguese Council of Ministers contains the target to have all primary and secondary schools connected to Internet by the year 2000.
FIN	3,500 schools	60% of the schools, 100% of universities	n/a
SWE	4,936 primary and secondary schools	17% ⁸¹ (1995)	The government sets wide national targets regarding schools and IT. Pupils shall have access to PCs, software and networks. The ability to use and take advantage of IT is considered a very important issue. More detailed targets within this framework are set on municipal level.
UK	<u>State sector</u> ⁸² : 23,426 primary schools 4462 secondary schools 1,458 special schools 287 pupil referral units <u>Non maintained sector</u> : 2,545 schools <u>Further education colleges</u> : 533	17% - 20%	BT has made a commitment to ensure that all schools can have high speed digital access to the Internet from BT by the end of the year 2000. In addition, the Government has set out certain targets for consultation.

⁸¹ Survey data from October 1997

⁸² Figures for schools relate to 1995/1996 and for further education colleges to 1997/1998

Table 4: Special Schemes to promote Public Internet Access

(Source: National replies to 1997 Commission questionnaire)

Country	Details of special schemes at the national level, which fully or partly ensure that schools and libraries have affordable access to Internet?	Are special tariff rates for Internet Access for schools and libraries mandated by regulation or simply commercially available?
B	A special tariff including reduced rates for ISDN is foreseen for the near future	By regulation
DK	Sektornet is a State financed infrastructure providing transport services and Internet access, for which schools and other educational establishments pay nothing to subscribe to and use except for the physical connection from the school to the nearest Sektornet service point. There are currently no special tariff schemes offered by operators to schools and libraries with regard to access lines to Internet Service Providers, beyond the general offerings.	No regulation.
D	No special tariffs; connection, operational costs and equipment for schools are subsidised by Deutsche Telekom and other sponsors.	
EL	n/a	No relevant regulation has been established yet. This subject will be discussed within the framework of the study on universal service currently under way.
E	n/a	n/a
F	France Telecom is working out a special offer for schools, but it has not been published yet. Other operators are also developing special schemes for schools.	No regulation
IRL	Access to Internet is a liberalised service and ISPs set terms and conditions on a commercial basis	No regulation
I		
L	No special schemes in place	
NL	see table 18	n/a
AUT	An agreement has been signed between the ministry of education and the arts and an Internet provider (NETWAY) offering free Internet access and free usage for all schools (via PSTN lines to be paid by the schools).	No regulation
P	Unique Access Number, AccessNET and NETLINE These schemes allow direct dialling to Internet Service Providers, the latter two using tariffs which are reduced relative to standard tariffs.	
FIN	No special schemes in place	n/a

Table 4 (continued) Special Schemes to promote Public Internet Access

country	Details of special schemes at the national level, which fully or partly ensure that schools and libraries have affordable access to Internet?	Are special tariff rates for Internet Access for schools and libraries mandated by regulation or simply commercially available?
SWE	In the budget proposal for 1997 the Swedish Royal Library is given the task of developing and running an IT based national library system; in addition, funds are allocated to upgrade and extent SUNET, the joint computer network of Swedish universities and other higher education institutions. Furthermore; state subsidies are available for libraries wishing to increase its IT use.	n/a
UK	The Government is consulting on measures as part of its National Grid for Learning project. The project EARL (Electronic Access to Resources in and through libraries) was launched in 1995 as the first UK national public libraries Internet initiative. It currently has 115 partners. It aims to make the advantages of Internet available to all library users, providing Internet connection, information and development services to its members. The cable industry offers schools special rates for connection to the Internet. Bt is planning to offer schools a special tariff for access to Internet.	Special tariffs for schools are not mandated by regulation.

ANNEX IV

Questionnaire To Member States

**Questionnaire on Universal Service Indicators and Related Aspects
in the EU Telecommunications Sector**

A - THE CURRENT SITUATION WITH RESPECT TO TELECOMMUNICATIONS SERVICES.

1. Questions concerning the proportion of households with telephone service and the penetration of the main telecommunications services

Previous Table A1

1.a Please complete table A1 for the end of 1995 and the end of 1996

Previous Table A2

1.b Please complete table A2 for the end of 1995 and 1996. For cellular subscribers, please indicate a total figure, and where possible, figures for analogue and digital subscribers.

In both cases, please also give more recent figures (for 1997) if they are available. Please also indicate in your response whether you also collect data breaking down penetration by income / social group / area.

2 Questions concerning aspects of service quality

Previous Tables A3, A4 and A5

2.a Please give up-dated details for these tables for the end of 1996. Please note that figures for fault repair times should identify separately indicators for households and for businesses.

2.b In updating table A5 also give a breakdown of public payphones between coin and card operated (or dual use) phones.

2.c Please give a description of the underlying criteria used to obtain the figures on fault repair times and working order.

2.d Please indicate which additional quality of service targets (for indicators not included in Table A3,4 and 5) have been set and to what extent these targets are met

3 Customer Complaints and Feedback

- 3.a *Does an independent body exist to deal with consumer complaints? Please give details (Name, address, contact telephone and fax numbers, e-mail, www.site).*
- 3.b *When can consumers make use of this appeals mechanism and is there a charge or fee for using this service?*
- 3.c *Please provide, if available, the number of consumer complaints relating to telecommunications dealt with by that body (or by the national regulator) for 1995 and for 1996.*
- 3.d *Please indicate whether the results of the independent bodies consideration of consumer complaints are published and, if so, in what circumstances, and in what form.*
- 3.e *Please identify and describe mechanisms in your Member State for involving consumers or groups representing users with specific needs in decisions relating to telecommunications policy.*

B- PRICES, AFFORDABILITY, SPECIAL MEASURES AND DISCONNECTIONS.

Competitive pressures and technological changes are leading to lower prices and are pushing tariff structures towards cost. At the same time it is important that all consumers can benefit from improved services and lower prices.

1 General tariff changes and rebalancing

Previous Tables A8 and A9

(Please note that some figures set out in table A9 are slightly different to those published in the Communication in order to correct a number of typographical errors pointed out to us in the published table).

- 1.a *Please update the information provided in previous Table A8 by providing the overall percentage change figures in nominal terms (and in real terms if available) for the period 1995 to 1997.*
- 1.b *Please give details of percentage changes in nominal prices for all the service categories in previous Table A9 for the period 1995 to 1997.*
- 1.c *Please provide the change in the domestic consumer price index during the same period considered in 1a and 1b above.*
- 1.d *Please give the details of any price cap controls on retail services provided by the main operator(s) which are currently in place or which are being introduced with a view to full liberalisation of your market.*
- 1.e *Is there a legal requirement for universal service to be provided at affordable tariffs and if so how is affordability measured? If specific criteria for affordability are set, how are they set?*

2 Special tariff and low user schemes

Previous Table A10

- 2.a *Please update the information set out in Table A10 concerning special tariff schemes to specific groups of customers.*
- 2.b *In particular, please indicate (with details) whether the following schemes exist :*
- (i) *schemes targeted towards particular social purposes (schemes for customers with disabilities*
 - (ii) *schemes designed for users on low incomes, etc or*
 - (ii) *schemes to offset the adverse impact on certain customers of re-balanced tariffs?*
- 2.c *Please indicate what, if any, obligations are placed on operator(s) to offer uniform prices throughout the national territory and for which service elements*
- 2.d *Are any further or new requirements relating to special tariff schemes being planned?*

3 Measures to assist customers not relating to call charges

- 3.a *Please give details of all measures or schemes, existing or planned, which are designed :*
- (i) *to make it easier for customers to obtain telephone service and*
 - (ii) *to monitor and control their expenditure.*
- In answering you should indicate whether or not the following services are available :*
- 3.b *Deferred payment for initial connection,*
- 3.c *Waiving of any deposit requirements*
- 3.d *Pre-payment of bills*
- 3.e *Control of expenditure through line or selective call barring (e.g. to premium rate services*
- 3.f *Monitoring of expenditure via itemised billing or other means. Please give information about the degree of itemisation i.e. only international and long distance calls; all premium rate calls; also local calls ?*
- 3.g *Obligations on one or more operators to ensure 'soft disconnection' (i.e. customers may be offered an out-going calls barred facility in cases of initial non-payment of bills though with ultimate sanction of disconnection)*

3.h *In relation to both questions 2 and 3 above is there a requirement for information on these schemes / measures to be published ?*

4 - Disconnections / Reconnections

The Commission wishes to know the extent and nature of private residential customer disconnections of basic telephone service.

4.a *Please give details of the number of:*

- (i) *residential customer disconnections and*
- (ii) *residential customer reconnections*

during 1995 and 1996 together with an indication, where this data is available, of the reasons for disconnection e.g., voluntary or involuntary (in the case of voluntary whether it is due to moving, ceasing telephone service or transferring to another operator).

4.b *Is this information published ?*

C - UNIVERSAL SERVICE FUNDING MECHANISMS

The introduction of full liberalisation across the Union from the beginning of 1998 means that universal service funding schemes will be put in place in some Member States.

Where this is the case, this requires the calculation of the net cost of universal service obligations and the establishment of means to make transfers between operators and service providers to compensate those with identifiable burdens.

1. Universal service funding schemes

1.a *Please indicate whether a universal service funding scheme will be put in place in 1998?*

1.b *Please indicate whether a scheme has been created, but will be effectively dormant at this stage?*

1.c *In the case where a universal service funding scheme will be in place in 1998, please indicate whether a national universal service fund, a system of supplementary charges, or system of direct State support is envisaged ?*

2. Cost estimates of universal service

2.a *Irrespective of whether a scheme will be in place in 1998, what is the estimated overall net cost of universal service obligations (as defined in Community legislation) in your country? Please give an indication both as an absolute figure and as a % of turnover of voice telephony services.*

- 2.b Please indicate briefly the methodology and principles employed to identify these net costs.

D USE OF AND ACCESS TO INTERNET

The last two years has seen a dramatic growth in the use of Internet by private consumers as well as business. General indications are that subscription levels have grown even faster than those for mobile telecommunications service. At the same time pressure has been mounting for action to help or promote public Internet access including access for schools and libraries. In the USA, this issue has been examined alongside the question of universal basic telephone service.

One of the difficulties for the debate within the Union is that there is lack of data on current Internet use by private consumers or public institutions.

In order to build up a better picture of the situation and report to Council and the European Parliament, the Commission is seeking the following information:

1 Private Internet Use

1. Please give the latest available figures in your country of the numbers of active Internet users, if possible differentiated between
 - (i) business,
 - (ii) educational and
 - (iii) residential use.

2 Public Internet Access

Public Access and Schools

- 2.a How many schools are there in your country (please identify both the overall total if possible and separate figures for primary, secondary and further education establishments)
- 2.b What proportion of these currently have access to the Internet?
- 2.c Please describe what, if any targets have been established for connection of schools to the Internet and/or new services and the timescale for achieving that target.

Public Access and Libraries

- 2.d How many public libraries are there in your country? (please indicate whether the figure includes public libraries associated with schools and other educational institutions?)

How many public libraries are associated with primary and secondary schools?

Within each category, what is the proportion that have Internet access?

Note : For both libraries and schools please indicate, if possible, a breakdown of the types of access means used, e.g., telephone line, ISDN, X.25, frame relay, dedicated leased line.

- 2.e *Please describe what, if any targets have been established for connection of libraries to the Internet and/or new services and the timescale for achieving that target.*

Special schemes to promote public access

- 2.f *Please give details of any special schemes at the national level, which fully or partly ensure that all schools and libraries have affordable access to internet?*

Please give details of any special tariff schemes that are available either for schools or for libraries to access Internet? Are such schemes based on a flat rate charging approach?

- 2.g *Please indicate whether such rates are mandated by regulation or are simply commercially available?*

Other areas of support for public access

- 2.h *Please provide details of other schemes, which have been put in place to further public access for citizens or for business via other points in the community.*

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