Chapter 3 – Fixed Telephone Service (FTS)

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3. Fixed Telephone Service (FTS)

This chapter shows the state of the FTS at the end of 2006, namely describing this service's offer, its usage and consumer profile, and the evolution occurred during that year.

Following is a summary of the main items of the service's evolution during 2006.

3.1. Main items of the evolution in 2006

- In 2006, for the second consecutive year, the number of FTS's direct access customers did not decrease. In fact, there were 3.25 million direct access customers registered by the end of the year, a figure close to that recorded in 2001. This result is motivated by the increase in the number of offers based on the Reference Unbundling Offer (RUO) and, mainly, by the emergence of offers using the network based on GSM (global system for mobile communication) as an access network.

- Regarding indirect access, the growing trend for pre-selection and call-by-call selection customers was reverted, falling -8.5 and -32 per cent, respectively. This evolution could be explained by the investment of new providers on other business models with better expected revenues, and by the tariff offerings by the incumbent operator.

- One of the most recent trends is the development of VoIP services. Currently there are 21 providers authorised to provide this kind of service. Two of these operators launched Nomadic VoIP services in 2006. The relative weight of this service in terms of customers and traffic is still quite small.

- Albeit the increase in the number of direct access customers, a trend persists concerning the decrease of this service's usage level. Traffic originated in the fixed network decreased 12 per cent in 2006, influenced by the migration of dial-up Internet access traffic to broadband.

  Voice traffic decreased 4 per cent, in line with the average recorded in the latest years. This decreasing trend of voice traffic is linked to the phenomena named fixed-mobile replacement.

  On the other hand, service revenues decreased 11 per cent, with the installation and subscription revenues falling for the first time since 2002. During the first years of the period under review, the increase in this type of revenues was a result of the tariff balancing process implemented by PT Comunicações, SA (PTC). In 2006, the fall of the average annual prices charged by PTC and the subscription by this company's former customers of offerings from alternative operators based on the Subscriber Line Resale Offer (SLRO) and on their own or leased infrastructure – offerings which had monthly subscription fees below PTC's – let to a decrease of this type of revenues.

- In 2006, prices paid by FTS residential customers in Portugal are above the average of the prices in the EU countries, although they contributed to the European average. Prices in Portugal remain below the European average for the items installation, subscription and calls to mobile numbers, and above the European average for calls to fixed numbers and calls to international numbers.

- FTS has a high satisfaction level in general. According to the most recent Survey on the use of electronic communications, 95 per of the users were satisfied with the overall quality of the service. Regarding consumer satisfaction with the prices practiced in the FTS, the opinion is less positive, with 49 per cent of those interviewed stating that they are not satisfied with

the charged prices.

- Regarding the development of competition, the investment of alternative operators on offerings without telephone subscription (namely based on GSM, on cable television distribution networks or on multiple play), resulted in a 11 per cent fall in the share of accesses of Group Portugal Telecom (PT), which reached 78 per cent.

  It should be mentioned that, according to the European Commission, the share of direct access customers from alternative providers in Portugal is the third highest one among the considered countries.

  Regarding voice traffic, Group PT's share suffered a 3.1 per cent drop, reaching about 71 per cent. In the European ranking, Portugal holds an intermediate position concerning the incumbent operator's traffic share and the rate of customers that use alternative providers to make calls.

  To this situation contributed the release of lower price offerings, namely indirect access ones and those based on the Local Loop Unbundling (LLU).

3.2. FTS offer

The FTS if the offer to the general public of voice routing, in real time, between fixed locations, giving any user with a device that is connected to a terminal point of a network the chance to communicate with another terminal point.

The service is provided by entities with a general authorization for the provision of the service, as well as by the universal service provider.

Below is a more detailed description of the services and the entities providing these services in Portugal.

3.2.1. Changes occurred in the provision of the FTS

Traditionally, telephone services were offered together (bundled) with the access to the public telephone network at a fixed location. The service was provided over the fixed telephone network and the local access network was made up of copper wire pairs. The digits that made up the telephone number given to each subscriber line made it possible for the service's user to associate that line to a given geographical area and a given service provider.

From the tariff viewpoint, two part tariffs were normally charged, with a clear separation of the component associated to the access (installation and subscription) from the component associated to the usage (price of calls). Regarding the call prices, there was the peak-load pricing and call prices were proportionate to their distance.

This situation was modified due to changes occurred during the latest years, of a regulatory, technological and commercial nature.

Indirect access

With the implementation of the so-called "indirect access", the offer of access to the public telephone network at a fixed location was split from the telephone services provided to the general public at a fixed location.

After 1 January 2000, the users of publicly available telephone services at a fixed location started to benefit from the indirect access service in the mode of call-by-call selection. This function allows FTS users to make telephone calls using the services of other FTS and not their access provider, further to dialling the 10xy code of each operator. Initially, only long-distance and international calls were eligible for the provision of this indirect access service.

After 1 July 2000, a new indirect access mode was launched: provider pre-

selection. This functionality makes it possible for the calls made by a user to be routed to the provider he/she prefers without the need of dialling the selection codes. Initially, pre-selection was implemented through the installation of an auto-dialler device at the customer's phone; pre-selection started being programmed at the operator's switchboards. In that same period, calls that were originated in the fixed networks and destined to a mobile network (fixed-to-mobile calls) started to be eligible for indirect access, both in the call-by-call selection mode and in the pre-selection mode. On 15 November 200, pre-selection became available for customers of the remaining areas of the country in its final format (without the installation of auto-diallers)

After 1 January 2001, local and long-distance connections also started to be eligible for use via indirect access.

Indirect access was the initially favoured way by most alternative operators to enter the market of telephone services provided at a fixed location, giving them the chance to reach quite important shares in terms of national and international traffic.

Portability

The possibility to keep the telephone number after changing operator, in a framework of competition, is another modification to the traditional way of providing the service that was imposed by sectoral regulation.

Portability, understood as the functionality through which the subscribers of publicly available telephone services that request it may keep their number or numbers, within the scope of the same service, regardless of the company offering it, at a given location in the case of geographic numbers, and all over the country with the remaining numbers, was introduced on fixed networks on 30 June 2001, and on mobile networks on 1 January 2002.

Law no. 5/2004 of 10 February – Electronic Communications Law (no. 5 of article 54 and no.1 of article 125) – empowers ICP-ANACOM to set the rules regarding the implementation of portability, which should take the form of a regulation.

In this context, ICP-ANACOM prepared Regulation no. 58/2005, published on 18 August, which establishes the principles and rules applying to portability on the public telephone networks, mandatory for all companies with portability obligations.

Change is only possible within the same service. I.e., it is possible to change the provider of the telephone service at a fixed location and keep the same number, it is possible to change the provider of the mobile telephone service and keep the same number and, also, it is possible to change the provider of a given non-geographic service (e.g. 800) and keep the same number. But it is not possible, for example, to migrate a number from a provider of telephone service at a fixed location to a mobile telephone service provider, or vice-versa.

Alternative physical means of access

Another change in the provision of the FTS was the emergence of alternative infrastructure to access the service. The highlight goes to the cable television distribution networks which, during the first years of liberalization of the service, made it possible for some operators to get a considerable share of accesses to the public telephone network at a fixed location, as well as radio means. The latter include the Fixed Wireless Access (FWA) and, later on, a solution supported on the frequencies associated to the provision of the Mobile Telephone Service.

It this last case it is a telephone service provided at a fixed locations, supported on the GSM technology and network, on General Packet Radio Service (GPRS) and on Universal Mobile Telecommunications System (UMTS) to access the final customer, and with access via mobile terminals. Mobile terminals make and receive calls within a given geographic area, corresponding to the customer address.

Through a determination of ICP-ANACOM from 14/09/2006, access to the service must me ensured via a terminal connected to a sole pre-determined Base Transceiver Station (BTS) whenever it makes, receives or maintains calls. In exceptional cases, technically justified and recognized by ICP-ANACOM, it is possible to associate the terminal to two – three, ate the most - pre-determined BTS. The provider should also inform end users on the service's characteristics, namely by clarifying that the access to the service is exclusively assured at the address stated by the end user, and that there are limitations at the level of caller location in calls made for the European emergency number (112).

These solutions have fostered the market of access to the public telephone network at a fixed location since the end of 2004, and with full development in 2005 and 2006.

Changes at the tariff level and in the way of marketing the service

At the tariff level, there are constant innovations that revolutionize traditional tariff models. On one hand, there is a tendency to create tariff packages where the access and usage components are separate. This happens by eliminating the component associated to access, with usage prices subsidising the access, or by creating access prices that are convertible into calls or with an associated calling credit.

Multiple-play package offers, which integrate voice services, Internet access, television (TV) distribution and contents, are some times associated to these tariff changes. These offers are provided over cable TV distribution networks or over the LLU-regulated offer.

In the cases where usage prices still exist, there is a phenomenon called 'postalization', which is the elimination of the proportionality between the price and the distance, and, to a lesser extent, the elimination of peak-load pricing. At the same time, optional tariffs and promotional offers have multiplied.

Apparently, these changes are contrary to the tariff principles proposed by economic theory, which would guarantee more productive efficiency. However, the changes correspond to users' needs, namely the simplification of tariff structures, the existence of a single invoice, cost control and the elimination of fixed components, items that are also relevant in tariff theory. On the other hand, in a context of a greater competition and decreasing usage of the service, and in an industry characterized by a high level of fixed costs and of operational leverage, this type of tariff offers are those assuring the most proper level of revenues.

One invoice

With the introduction of indirect access, users started to receive two telephone invoices: one on access and sent by the incumbent operator and another regarding communications and charged by the alternative providers.

Recently, the alternative providers were given the possibility to present the end customer with one sole invoice and one joint offer of access service and telephone services. This possibility results from regulatory imposition of SLRO – determination of 14/12/04.

SLRO is available to companies that, dully licensed by ICP-ANACOM, provide the following services over a given PT subscriber line:

i) Telephone service at a fixed location under a pre-selection regime, regardless of the type of pre-selected traffic; and/or

ii) Broadband Internet access services, including services supported over unbundled lines in the mode of Shared Access.

Offers supported on the SLRO have had some commercial success: the number of unbundled accesses increased 171.8 per cent in 2006.

Voice over Internet Protocol (VoIP)

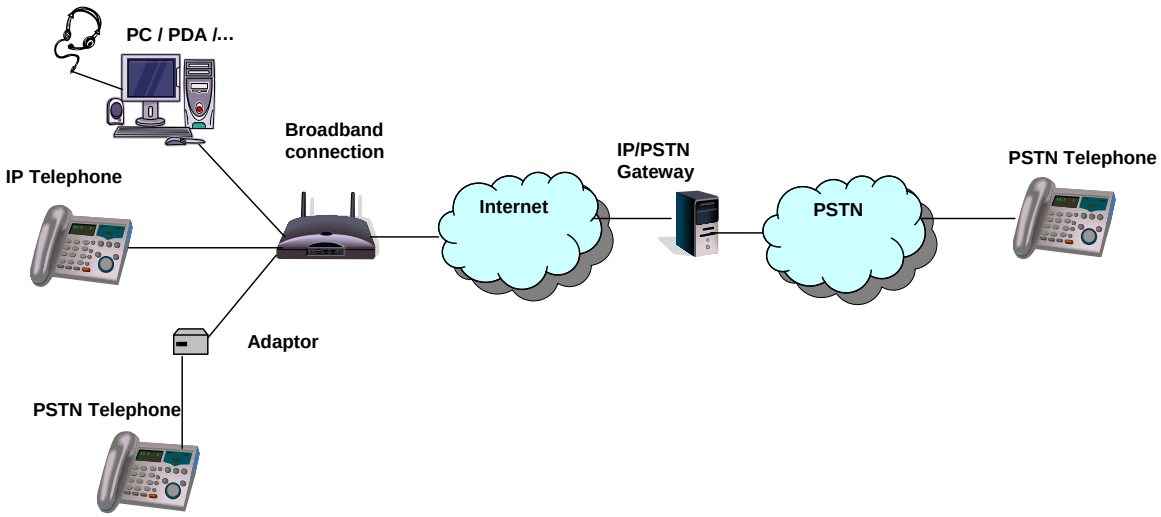
Lastly, mention should be made to the introduction of voice services supported on broadband Internet access offers, in the scope of the already mentioned multiple-play offers. These offers based on the Internet Protocol (VoIP) mainly have very low price levels.

VoIP is a technology that enables the user to establish telephone calls through a data network such as the Internet, converting an analogue voice signal into a set of digital signals, under the form of IP address packages, which can be sent, namely, through an Internet connection (preferably broadband).

The increase of broadband accesses for Internet use, together with the emergence of ever more stable protocols at the standardization level, enable the current development of applications supporting video and voice interactive services, such as VoIP, ensuring a voice quality perceived by the user as close to that of the traditional telephone service. Thus, the VoIP service has had an increasing demand by end users.

Today there are several types of terminals [personal computers - PC, IP telephone, Personal Digital Assistants - PDA, etc…] enabled to make VoIP calls, while the physical access should preferably be broadband, since currently it is not yet viable to guarantee an adequate bandwidth for the operation of VoIP on a narrow band connection over the public Internet. Broadband access may be supported on wire technologies, such as Asymmetric Digital Subscriber Line (ADSL), cable, optical fibre, and power line, or on wireless technologies, such as 3G, satellite, Fixed Wireless Access (FWA), WiFi (Wireless fidelity) or WiMax (Worldwide interoperability for microwave access).

Graph 3-1 – Typical network configuration for the use of VoIP as a publicly available electronic communications service



In the scope of FTS, these publicly available VoIP services, regulated by Law no. 5/2004, may be offered by an access provider, namely broadband:

i) At a sole fixed location and under conditions perceived by the user as being equivalent to those of the traditional fixed telephone service.

   In matters of numbering and portability, ICP-ANACOM understands that VoIP offers provided at a fixed location could be granted a geographic numbering, being the VoIP provider's responsibility to ensure the fulfilment of this requirement (use at one sole location);

ii) Through nomadic use offers, able to be used on several locations, supported on third party accesses, i.e., without control of the access network (Skype-OUT/IN is one example of this kind of services), and being able to make and receive calls.

   It was considered adequate to grant this nomadic VoIP mode a new range of non-geographic numbering[9] – "30" – that distinguishes it from the telephone service provided at a fixed location.

[9] It was decided, under article 17 no. 2, paragraph b) of the Electronic Communications Law (Law no. 5/2004 of 10 February), to open range "30" to host VoIP nomadic use services by ranges of 10,000 numbers to the providers entitled to provided nomadic VoIP services, under the terms defined by ICP-ANACOM. Taking into account paragraph g) of no. 1 of article 3 of the Portability Regulation, range "30" was included in the scope of portability.

3.2.2. Accesses to the public telephone network at a fixed location

Regarding access to the public telephone network at a fixed location, it can be provided using several media:

- Copper wire pairs – this medium is mostly user by PTC, the incumbent operator, and is the one currently ensuring a greater geographical and population coverage. With the implementation of the RUO, alternative operators started to provide access to the public telephone network at a fixed location using the incumbent operator's unbundled local loops;

- Coaxial cable – cable made up of a central copper wire, enclosed by a belt of intertwined copper wires, and separated by an insulating material. This type of cable is used for carrying electrical signals at higher frequencies thank those carried by a simple pair of metallic wires. It is one of the main elements of hybrid cable television (CATV) distribution networks. There is currently one fixed telephone service provider offering fixed access through coaxial cable (Cabovisão)[10];

- Fixed Wireless Access (FWA) – Access technology that enables operators to provide to their customers a direct connection to their telecommunications network, using a fixed radio link between the customers' premises and the operator's local switchboard. There are five active operators [AR Telecom, Novis, Vodafone, Onitelecom and PTC] with FWA licences[11]. Radio connections are used as a complement to their non-radio access networks, usually for non-residential customers;

- Power Line Communications (PLC) – Access technology using energy cables for broadband voice and data routing. This technology enables the use of a

[10] There are other cable TV distribution network operators advertising telephone services. However, theses companies are only authorized to provide voice over the Internet services. According to the available data, these services do not replace the FTS, and thus are not taken into account in this chapter.

[11] The rights of use were reconfigured by ICP-ANACOM in 2006. The reconfiguration of the system was achieved by transforming a national coverage system into a system made up of several geographical areas.

local household voice and data network, from any electrical socket, to provide high speed Internet access, telephone and fax services. Onitelecom was the only fixed telephone service provider to offer fixed access using PLC. However, it suspended the offer in October 2006;

- Fibre optics – physical transmission means (usually a cable with several pairs of fibreglass) in which data is routed as light impulses. It is a broadband medium that can provide the capacity to carry large amounts of data at long distance and with small distortion, if connected to the proper device. Both the new operators (Onitelecom, Novis, Coltel, AR Telecom, Refer telecom, Cabovisão), and PTC have installed fibre optics in their access networks, particularly to be used by the non-residential market;

- Radio-relay – transmission system that disseminates of radio waves in the atmosphere using dish antennas. The use of radio-relay connections is negligible, considering the large investment needed to maintain them.

- Access using the frequencies granted for the provision of MTS. ICP-ANACOM authorized the use of frequencies granted to GSM and UMTS networks for the provision of FTS, imposing limitations to the mobility of the devices used to provide this service, as mentioned previously;

It should be mentioned that, possibly, all the main means of access to the public telephone network are present in Portugal.

The following types of access are provided over these physical media:

- Analogue accesses – corresponding to accesses using a single 64kbit/s channel, in principle to carry voice and data up to 56 Kbit/s;

- Basic rate digital accesses [basic ISDN accesses (Integrated Services Digital Network) accesses] - corresponding to accesses using two 64kbit/s channels for carrying voice and data, and a 16 Kbit/s signalling channel;

- Primary rate digital accesses [primary ISDN accesses] - corresponding to accesses using 30 64kbit/s channels for carrying voice and data, one 64kbit/s signalling channel and one synchronism channel, with a global throughput of 2 Mbit/s;

3.2.3. Telephone services provided to the general public at a fixed location

The FTS enables the user to make and receive national and international voice calls, and is usually provided together with several applications, characteristics and optional services.

The following table summarizes the main services (traditional voice services, characteristics, associated services, etc.) that FTS providers can offer.

Table 3-1 – Products and services provided by FTS providers

Products/services	Brief description
Analogue telephone line (only for direct access[12])	Corresponds to the traditional telephone service, for making and receiving voice calls ate fixed locations. With the use of a modem it gives access to further services, namely data transmission and fax
Service features (only for direct access)	Features that modify or increase the basic features and characteristics of the basic telephone services (e.g.: call waiting, call re-routing, SMS – short message service – and MMS – multimedia messaging service, etc.).
Tariff services	Detailed invoicing
Digital telephone line — ISDN (Integrated Services Digital Network) services (only for direct access)	Service also provided using a public telephone network enabling the integration of voice and data services into one single access. Currently available ISDN connections are as follows: - basic ISDN access: access to the ISDN with two 64kbps voice and/or data channels and one 16kbps signalling channel, witch can be used for package data; - primary ISDN access: access to the ISDN with 30 64kbps voice and/or data channels and one 64kbps signalling channel, and one 64kbps synchronism channel, with a total throughput of 2Mbps. Other supplementary services can be provided over ISDN lines, such as caller ID or its suppression, call re-routing, etc.
Operator services	Information and telephone directory services, operator assisted communications services, collect call services, SMS and MMS, etc.
Access to public services	Access to emergency services and other services.
Call-by-call selection and pre-selection	Feature making it possible to select a FTS provider other than the one holding the local loop. This choice is made by dialling a short code (the provider's 10xy prefix) when making the call –call-by-call selection – or further to a pre-selection contract.
Operator portability (only for direct access)	Feature that enables a subscriber of a given service to choose to keep their telephone number when changing to another operator of the same service.
Public payphones for access to the fixed telephone service	Terminal equipment for access to the FTS (telephone booths), installed at public locations, including the conditioned access ones, available to the general public as a paid service.

Source: ICP-ANACOM

Due to the increased network convergence, integrated solutions offered by providers may include other types of service, namely the provision of voice, data and video in one singe fixed access, with the proper equipment. Theses solutions are usually fitted to the segments they target (residential, self-employed professionals, companies, etc.)

[12] Depending on whether the local access is held by the FTS provider or not, it can be FTS by direct access, or FTS by indirect access.

3.2.4. The FTS providers

Below is a list of the FTS providers, with highlight to the Nomadic VoIP providers. Listed are also the public payphones providers.

FTS providers

By the end of 2006 there were 23 entities authorised to provide FTS (Table 3-2)

The following table contains the list of entities that were legality authorized to provide FTS in 2006. This table includes data on the state of each operator at the beginning and at the end of the year, as well as information on the market entries and exits during this period.

Table 3-2 – FTS providers in 2006

Name	beginning	Entries	Exits	End
ADIANIS – Telecomunicações & Multimedia, S.A.	NA			NA
AR Telecom – Acessos e Redes de Telecomunicações, S.A.	A			A
Broadnet Portugal, S.A.	NA			NA
BT Portugal — Telecomunicações, Unipessoal, Lda.	NA			NA
CABO TV Madeirense, S.A.	-	x		NA
Cabovisão — Televisão por Cabo, S.A.	A			A
CATVP – TV Cabo Portugal, S.A.	-	x		NA
COLT Telecom - Serviços de Telecomunicações, Unipessoal, Lda.	A			A
Equant Portugal, S.A. (ORANGE)	A			NA[13]
G9 SA — Telecomunicações, S.A.	A			A
Media Capital — Telecomunicações, S.A.	NA			NA
Netvoice — Comunicações e Sistemas, Lda.[14]	A		x	-
NEUVEX – Telecomunicações, Marketing e Informática, Lda. (RedvoTelecom)	NA			NA
Novis Telecom, S.A.	A			A
OniTelecom — Infocomunicações, S.A.	A			A
Optimus Telecomunicações, S.A.	NA			NA
PT Comunicações, S.A.	A			A
PT Prime — Soluções Empresariais Telecomunicações e Sistemas, S.A.	A			A
Radiomóvel - Telecomunicações, S.A.	NA			A
Refer Telecom — Serviços de Telecomunicações, S.A.	A			A
Telemilénio — Telecomunicações, Sociedade Unipessoal, Lda (Tele2)	A			A
TELSOCOMM - Telecomunicações, Marketing e Informática, Lda.	NA			NA
TMN — Telecomunicações Móveis Nacionais, S.A.	A			A
Vodafone Portugal — Comunicações Pessoais, S.A.	A			A
TOTAL ACTIVE	14	-	1	13
TOTAL NOT ACTIVE	8	2	-	10
TOTAL OVERALL	22	2	1	23

Source: ICP-ANACOM Legend: A — Active NA — Not Active

At the end of 2006 there were 13 active providers in the FTS markets, 1 less than a year before. The only company that requested the cancelling of its licences merged with another operator.

[13] In Portugal, the provision of EQUANT (ORANGE)'s fixed telephone service is made by Novis.
[14] Further to the merging process with AR Telecom, NETVOICE requested the cancelling of its licences, to be in force after 1-1-2006.

Of the thirteen entities operating by the end of 2006, two provided the service exclusively by direct access, two provided the service only through indirect access, and the remaining ones provided the service using both access types. (Table 3-3).

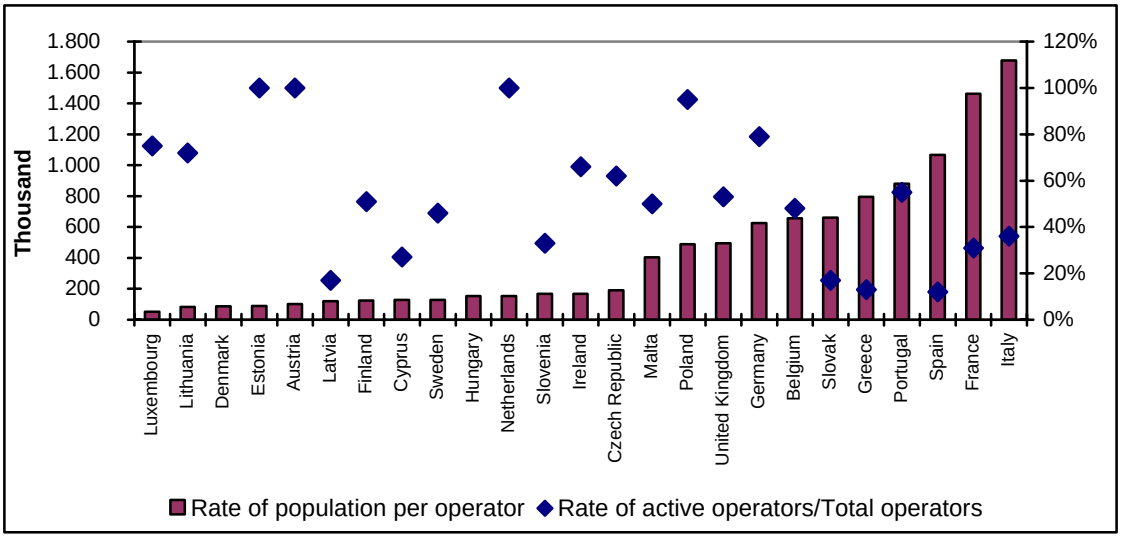
Table 3-3 – FTS providers

	2002	2003	2004	2005	2006
Authorized providers	27	26	21	22	23
Active providers	13	13	13	14	13
Providers with direct access and indirect access traffic	7	8	8	10	9
Providers with direct access traffic only	3	2	2	1	2
Providers with indirect access traffic only	3	3	3	3	2

Source: ICP-ANACOM

Considering the population residing in each country, the number of providers legally authorized to provide FTS in Portugal stands below the average. Regarding active operators, the percentage of active operators in Portugal is similar to the EU average – about half of the legally authorized providers are in operation.

Graph 3-2 – International comparison of the amount of providers



Source: European Commission, 12th Implementation Report. Data from July 2006.

Nomadic VoIP providers

Regarding VoIP, in 2006 there were providers authorized to provide VoIP services. However, only 8 were entitled to provide nomadic VoIP services.

Table 3-4 – Nomadic VoIP providers

Numbering Allocation Date	Blocks 30XYZ XXXX	Company
05/04/2006	30140 XXXX	Webmeeting – Internet e Consultoria Informática, Lda.
28/12/2006	30300 XXXX	Cabo TV Madeirense, S.A.
06/11/2006	30330 XXXX	Siptelnet - Soluções Digitais, Unipessoal, Lda.
04/04/2006	30450 XXXX	G9SA - Telecomunicações, S.A.
10/08/2006	30550 XXXX	Netcall – Telecomunicações e Tecnologias de Informação, Lda.
10/08/2006	30551 XXXX	
10/08/2006	30552 XXXX	
10/08/2006	30553 XXXX	
20/04/2006	30660 XXXX	Neuvex - Telecomunicações, Marketing e Informática, Lda.
05/09/2006	30940 XXXX	Radiomóvel - Telecomunicações, S.A.
25/08/2006	30990 XXXX	CATVP - TV Cabo Portugal, S.A.

Source: ICP-ANACOM

Only 2 of these 8 providers were active: Netcall and G9SA. Most of the remaining operators expect to start the commercial operation of the service during 2007.

Public payphone providers

Below is the list of public payphone service providers.

Table 3-5 – Public payphones service providers in 2006

Name	Beginning	Entries	Exits	End
A. RASHID – Comércio de Material Eléctrico, Unipessoal, Lda.	A		X	-
ADIANIS – Telecomunicações & Multimedia, S.A.	NA			NA
BLUE CARD – Serviços de Telecomunicações e Informática, Lda.	NA			A
C. C. Comunicações a Crédito, Lda.	A		X	-
CHOUDHARY – Comércio de Equipamentos de Telecomunicações, Lda.	A			A
EPORTEL – Prestação de Serviços em Telecomunicações, Lda.	NA			NA
FLASHAD – Electrónica e Comunicações, Unipessoal, Lda.	-	X		A
G9 SA – Telecomunicações, S.A.	A			A
GLOBEVOX – Serviços de Telecomunicações, Lda.	A			A
Manuel Soares & Pereira, Lda.	A		X	-
MOBILE ZONE – Telecomunicações, Comunicações Electrónicas, Unipessoal, Lda.	A		X	-
MONEYCALL – Serviços de Telecomunicações, Lda.	A			A
NETCALL – Telecomunicações e Tecnologias de Informação, S.A.	A			A
OPTION 1 – Serviços de Telecomunicações, Lda.	-	X		A
PHONE ONE — Serviços de Telecomunicações, Lda.	A			A
PT Comunicações, S.A.	A			A
Seye & Bari, Lda.	-	X		NA
UNO CALL NOW – Comunicações e Serviços, Lda.	-	X		NA
TELJAP – Manutenção, Instalação e Comercialização de Telecomunicações, Lda.	NA		X	-
WORLD FUN TELECOM - Redes de Telefonia, S.A.	A			A
XALAT – Comunicações Electrónicas, Unipessoal, Lda.	NA			NA
TOTAL ACTIVE	**12**	**2**	**4**	**11**
TOTAL NOT ACTIVE	**5**	**2**	**1**	**5**
TOTAL OVERALL	**17**	**4**	**5**	**16**

Source: ICP-ANACOM Legend: A — Active NA — Not Active

At the end of 2006 there were 16 public payphone providers in operation, with the entry of 4 new operators, 2 of which were active, and the exit of 5 operators, 4 of which were active.

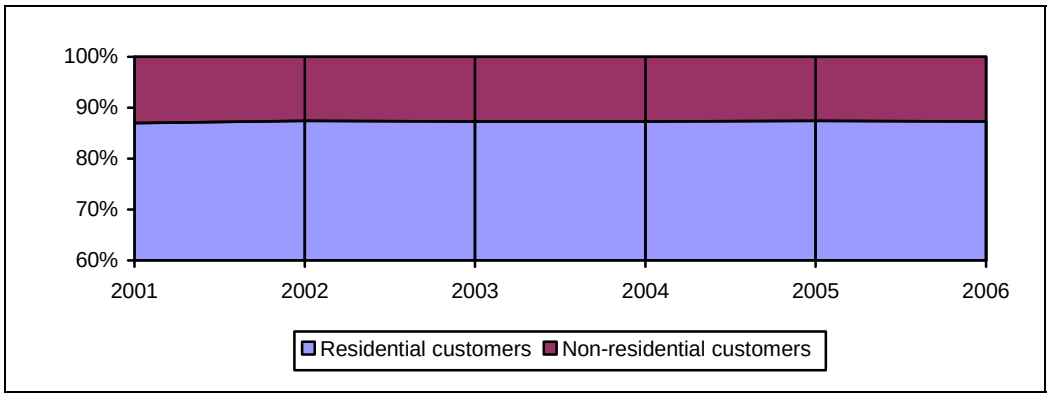
3.3. FTS usage profile

Below are the mains characteristics of FTS users, the characteristics of the services accesses and the traffic, as well as the main barriers invoked by users for not subscribing to the service.

3.3.1. Characterizing the FTS user

FTS users are mostly residential. Only about 13 per cent of FTS customers are non-residential. As the following graph shows, these rates have not varied greatly throughout the period under review.

Graph 3-3 – Residential and non-residential customers (%)



Source: ICP-ANACOM

Among residential customers, service penetration is quite above the average for those above 55 years old and in the case with higher educated customers.

Table 3-6 – STF penetration by age group

Age group	Dec. 2006
15-24	56.7%
25-34	39.8%
35-44	49.9%
45-54	58.2%
55-64	74.3%
65-more	88.6%
Total	59.2%

Source: ICP-ANACOM, Survey on the use of electronic communications - 2006

Table 3-7 – STF penetration by education level

Education level	Dec. 2006
University/ Post-graduate/ Masters/ PhD	82.6%
Under-graduate/ Polytechnic	67.3%
12th grade	53.6%
9th grade	52.7%
6th grade	53.5%
Primary education	58.2%
Incomplete primary education/illiterate	56.9%
Total	**59.2%**

Source: ICP-ANACOM, Survey on the use of electronic communications - 2006

The residents of the Autonomous regions subscribe to the FTS more intensely than the remaining areas of the country.

Table 3-8 – FTS penetration by NUTII

Region	Dec. 2006
North	56.7%
Midland	61.1%
Lisbon and Vale do Tejo	58.9%
Alentejo	60.1%
Algarve	52.3%
Madeira	71.6%
Azores	81.9%
Total	**59.2%**

Source: ICP-ANACOM, Survey on the use of electronic communications - 2006

3.3.2. FTS usage characteristics

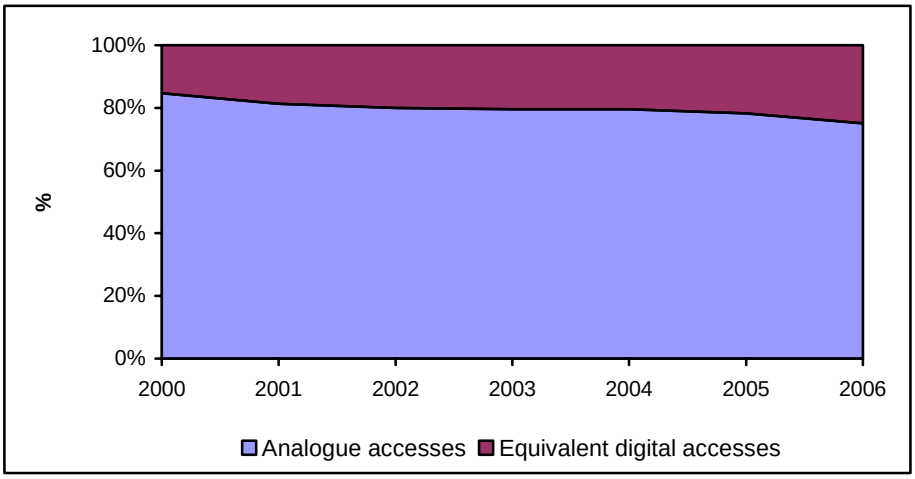
Below is a characterization of the use of FTS accesses and calls.

Accesses

The large majority of direct accesses to the FTS is made up of analogue accesses. However, since the beginning of the liberalization process, the ratio of equivalent digital accesses grew considerably, particularly in 2000 and 2001. During his period equivalent digital accesses reached around 20 per cent of all accesses. This evolution is mainly due to the commercial strategies of the alternative operators who invested in this type of offer.

The trend described above grew stronger in 2005-2006 as a result of the increase of accesses using the GSM networks. By the end of 2006, the rate of equivalent digital accesses was about 25 per cent.

Graph 3-4 – Distribution of accesses by type of access[15]



Source: ICP-ANACOM

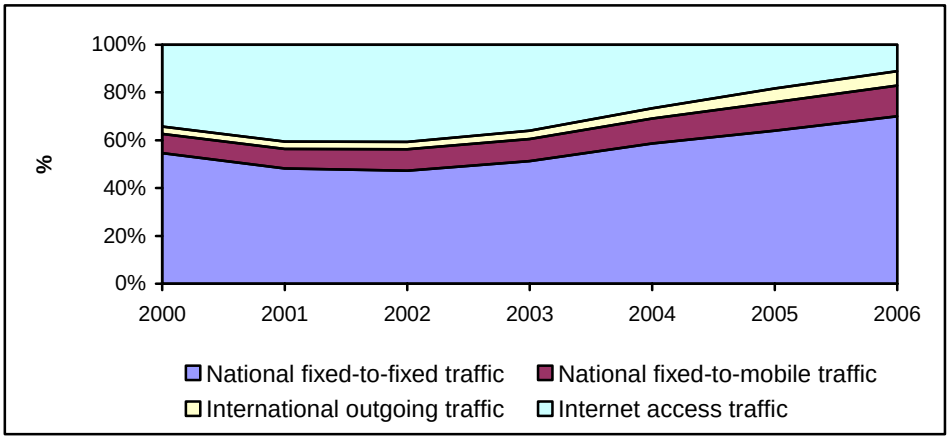
[15] Includes accesses installed at customer request and public payphones. Does not include own stock.

Traffic

Switched traffic routed by the fixed network is mainly made up of fixed-to-fixed calls (70 per cent). It is followed by fixed-to-mobile traffic (18 per cent) and outgoing international traffic (6 per cent).

The importance of the switched Internet access (dial-up) traffic, which in an early stage gained a considerable weight regarding total traffic due to the take-up of Internet and the introduction of free Internet offers by alternative operators, has suffered an accelerated fall due to the migration to broadband. This fact has contributed to the increase in the weight of the remaining traffic destinations.

Graph 3-5 – Distribution of traffic by destination (Minutes)



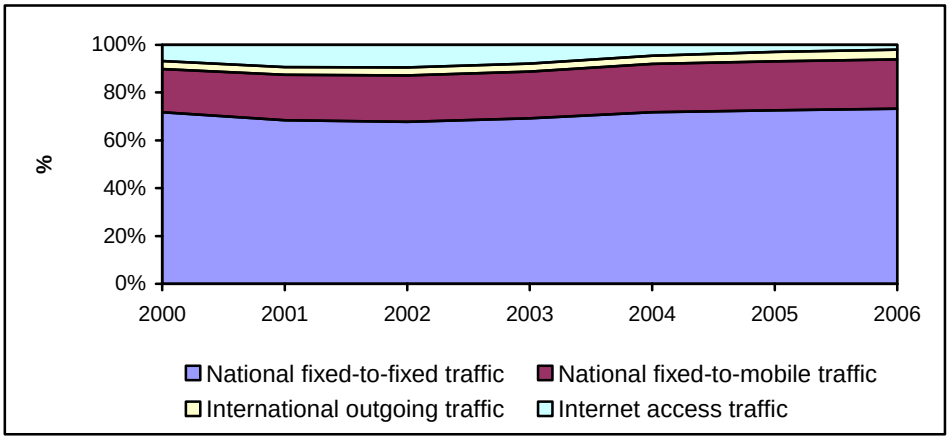
Source: ICP-ANACOM

The above-described distribution is considerably changed when considering the amount of calls. This is explained by the fact that the amount of minutes of Internet access calls is much higher that the amount of calls (i.e. Internet access calls have a longer length than the remaining ones). Regarding the number of calls, fixed-to-fixed traffic stands for more than 73 per cent of the overall figure, while fixed-to-mobile traffic and international calls stand for about one fifth and 4 per cent, respectively. Internet access calls only stand for 2 per

cent of all calls.

Also in this case the migration to broadband had an impact on traffic in this period in time.

Graph 3-6 – Distribution of traffic by destination (Calls)



Source: ICP-ANACOM

Traffic: Average call length

Voice calls originated and ended in the fixed network have a length of 2 minutes and 50 seconds and are about 1 minute longer than fixed-to-mobile calls. These differences are probably explained by the differences existing between the prices of these calls.

On the other hand, international calls reached a length of 4 minutes and 25 seconds in 2006. The increasing length of international calls may be also explained by tariff reasons. In fact, in the latest years, there has been a reduction of the prices of these calls and the launch of optional and promotional offers specifically targeted, e.g., at immigrant communities.

The average length of Internet access calls reached more than 17 minutes in 2006, a figure below that of 2005 and 2006, and in line with the values

registered in the previous years. It would be expected that, as these service's intensive users migrate to broadband solutions, the average call length would decrease.

Table 3-9 – Average call length

	2000	2001	2002	2003	2004	2005	2006
Total traffic (voice + Internet)	3.64	3.96	4.05	3.79	3.46	3.18	3.03
Voice traffic	2.57	2.60	2.65	2.64	2.66	2.68	2.76
National traffic (voice)	2.54	2.56	2.61	2.59	2.60	2.60	2.68
National fixed-to-fixed traffic	2.77	2.79	2.82	2.81	2.83	2.81	2.91
National fixed-to-mobile traffic	1.62	1.71	1.87	1.80	1.79	1.85	1.88
International outgoing traffic	3.26	3.65	3.70	4.01	4.21	4.42	4.43
Internet access traffic	18.25	17.24	17.41	17.31	20.44	20.08	17.14

Source: ICP-ANACOM Unit: Minutes

3.3.3. Barriers to service subscription

According to the data collected in the Survey on the use of electronic communications – December 2006[16], and as the following table shows, the main reason for not subscribing to the FTS is the use of mobile phone, In fact, 75 per cent of those interviewed that do not have FTS point out this motive as the main reason for not using the service.

The existence of a monthly fee as part of the invoicing was also considered a decisive factor for not using the fixed telephone.

[16] The universe defined for this study included individuals of both genders, aged 15 years old or over, residing in Mainland Portugal and in the Autonomous Regions of Madeira and the Azores. Selection of those interviewed was made by method of gender, age, education and occupation quotas. The sample was stratified by region and habitat. 2,020 interviews were conducted overall, ensuring a 2.18% maximum error margin for the main results. The fieldwork and data handling was performed by MARKTEST between 17 January and 22 February 2006.

Table 3-10 – Reasons for not having fixed network telephone (%)

Uses mobile phone	75.3%
Prefers not to pay the monthly fee	19.5%
It is cheaper to make calls using other media	2.0%
Does not need	1.8%
Other motives	0.9%
Recent/rented house	0.3%
Too expensive	0.0%
N.a.	0.3%
Total	100%

Base: Interviewees without fixed network
Source: Survey on the use of electronic communications - December 2006

Consumers refer that the mains advantages of mobile phones over the fixed telephone are the mobility and the fact that the mobile phone enables a permanent contact. These characteristics are inherent to the service and may not be replicated in the case of the fixed mobile service.

Table 3-11 – Advantages of mobile over fixed

	Dec. 2006
To be reachable at all times	49.1%
Mobility	39.9%
Absence of monthly fee	6.3%
Prices of calls	2.7%
Other answers	2.0
Total	100.0%

Source: Survey on the use of electronic communications - December 2006

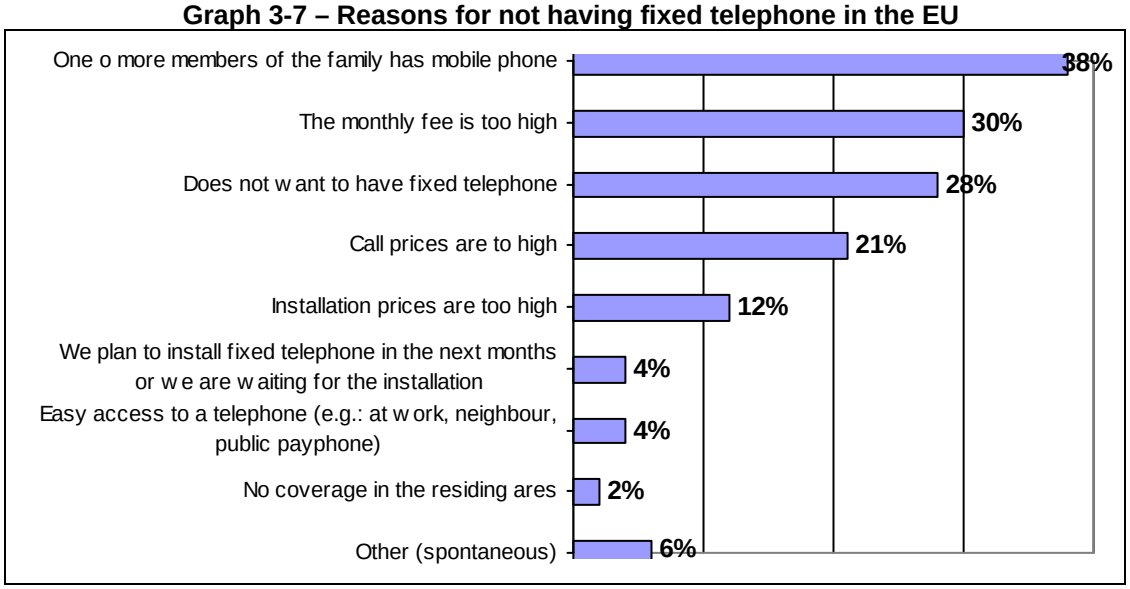
The motivations presented by Portuguese consumers not to subscribe to the FTS are very similar to those stated by their European counterparts.

According to the European Commission[17], the fact that one member of the family has a mobile phone is the most stated reason for not having fixed network. The costs associated to a fixed telephone line are also pointed as a reason for not having a fixed telephone. One out of three households without fixed telephone claim that the monthly fee is too high. On out of 5 considers that call prices are

[17] European Commission, E-Communications Household Survey, Special Eurobarometer 249.

high and 12 per cent of those surveyed mention that they could not support the installation cost.

Graph 3-7 – Reasons for not having fixed telephone in the EU



Source: European Commission.

Apparently, service subscription barriers of an economic nature are lower in Portugal than in the EU, where they are the majority. On the other hand, the influence of MTS is much greater in Portugal.

3.4. FTS evolution in 2006

Below is a set of items on the evolution of the FTS in 2006: service availability; penetration, service's usage intensity, evolution of access, traffic and revenue shares, and price evolution and quality perception.

3.4.1. Service availability and penetration

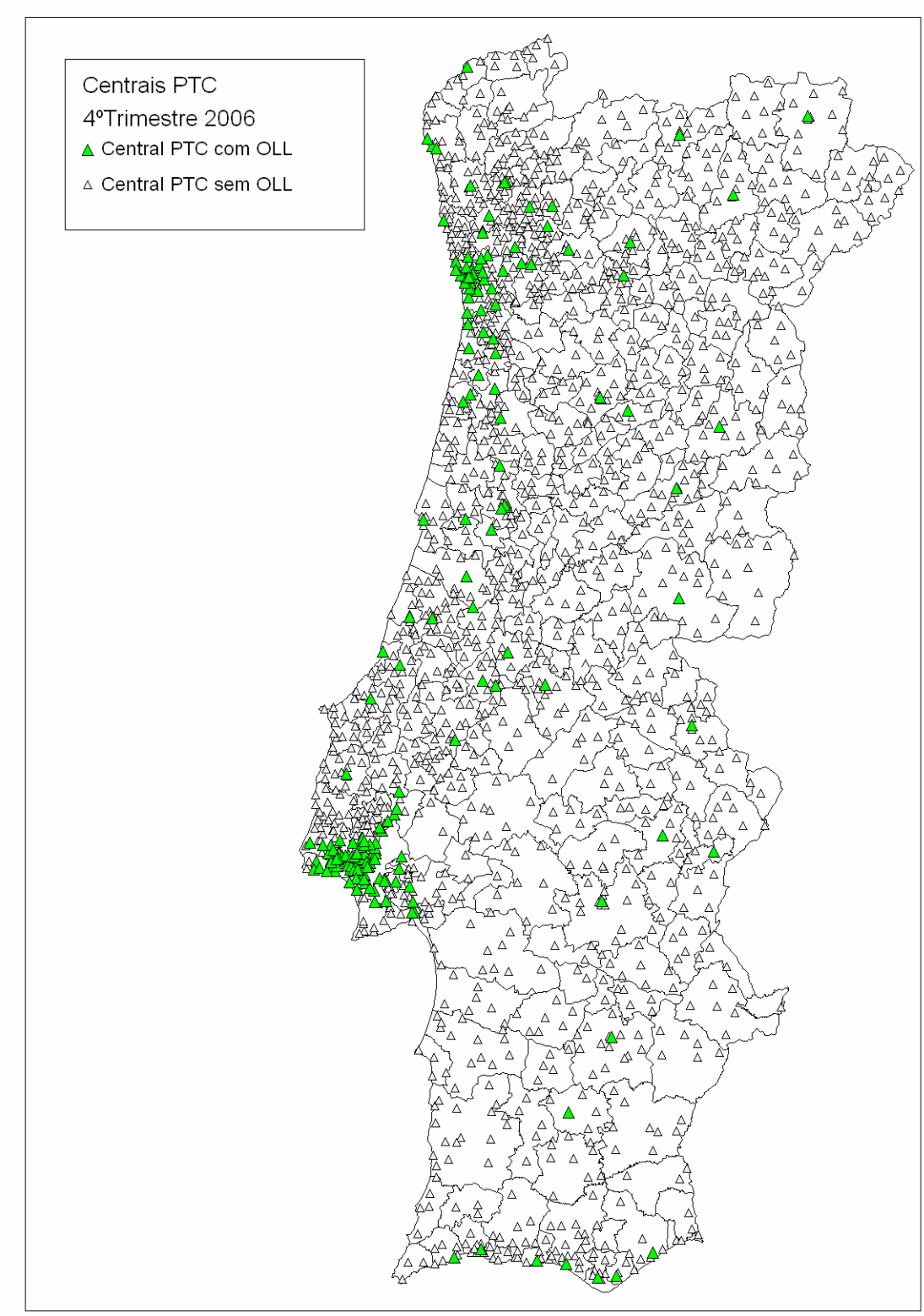
As shown on the graph below, the fixed telephone network operated by the incumbent operator is available in the whole of the continental territory. In the autonomous regions there is also a strong presence of the fixed network, with .switchboards and telephone concentrators in all the islands of the territory.

The graph also shows the distribution of MDF (Main Distribution Frames) with unbundled local loops, which are concentrated in the main urban centres of Mainland Portugal. Local loop unbundling led to the emergence of package offerings from the alternative providers.

It is also possible to access the service through the networks of cable TV distribution operators, which provide FTS over those networks, and through mobile networks.

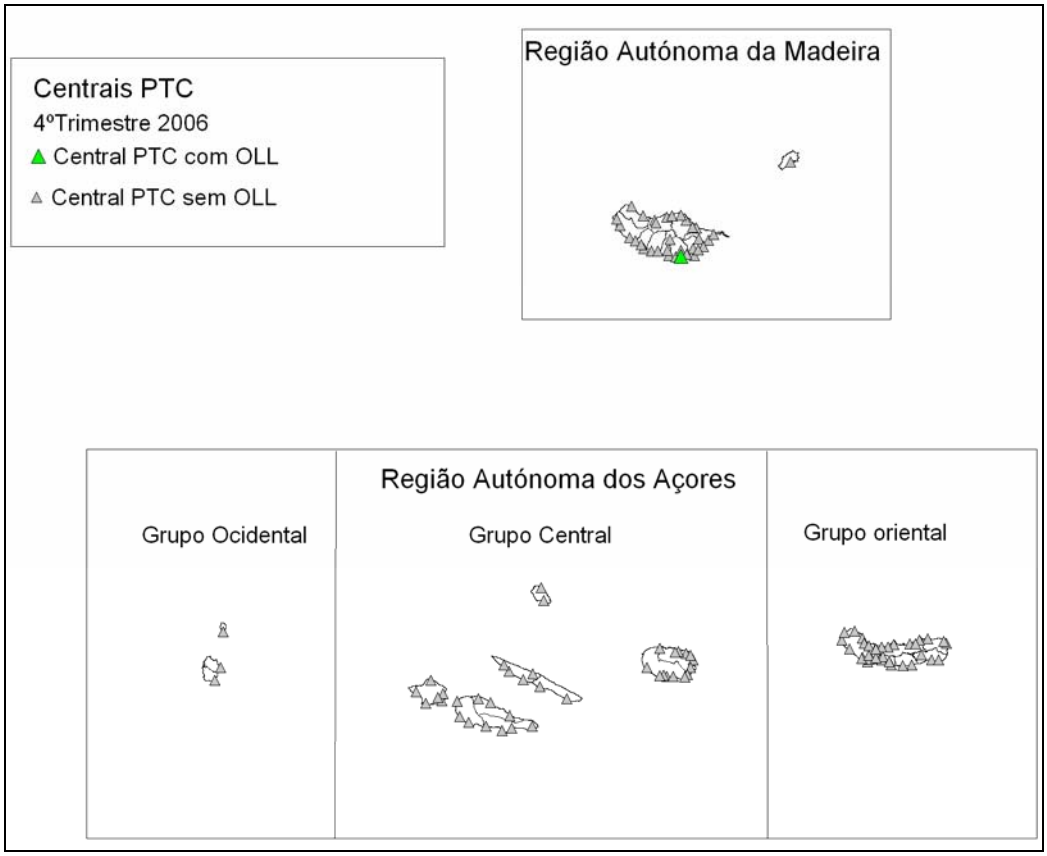
Regarding publicly available telephone services at a fixed location, it is possible to use the services of alternative operators in all the national territory using indirect access and, after 2006, using VoIP offers (in the case with users with broadband Internet access).

Graph 3-8 – Distribution of PT's switchboards and PT's switchboards with unbundled local loops (Mainland Portugal)



Source: ICP-ANACOM

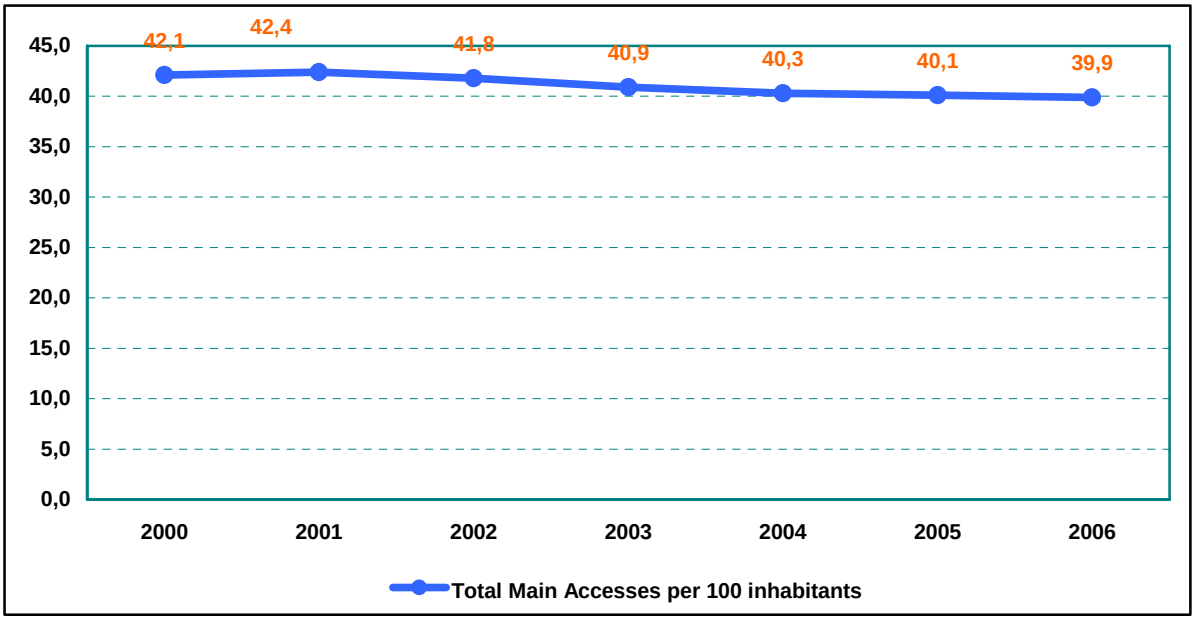
Graph 3-9 – Distribution of PT's switchboards and PT's switchboards with unbundled local loops (Autonomous Regions of Madeira and the Azores)



Source: ICP-ANACOM

Although the service is generally available in the whole of the country, between 2002 and 2006 there was a drop in the penetration rate, which could be linked to some of the factors mentioned in section 3.3.3.

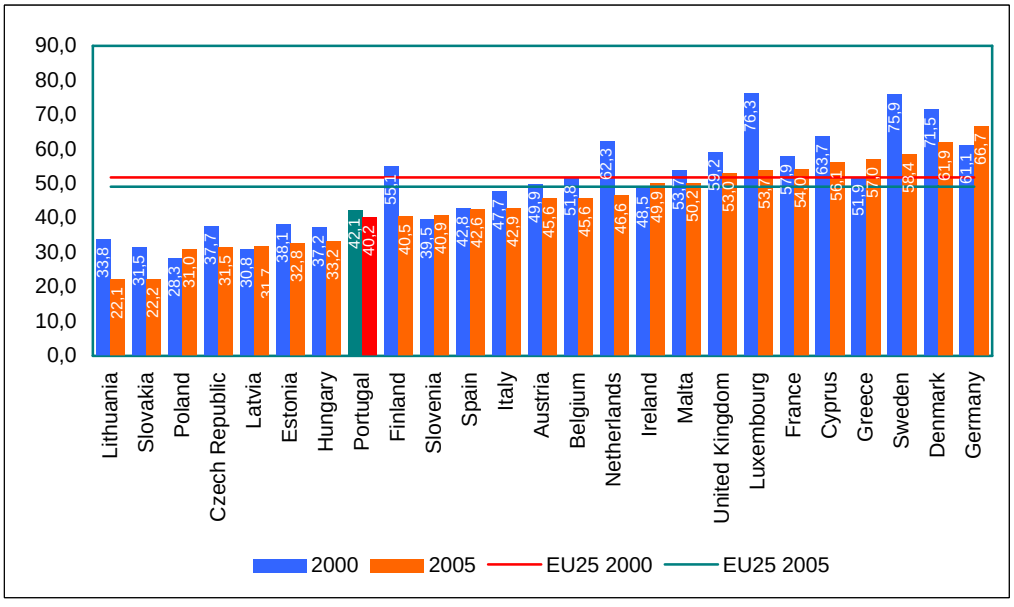
Graph 3-10 – Evolution of telephone penetration



Source: ICP-ANACOM

Telephone penetration is Portugal (40 accesses per 100 inhabitants) is below the European average (49, in 2005). However, there was also a decrease in this service's penetration in the EU: -2.7 per cent between 2000 and 2005, a decrease above the one recorded in Portugal during that period (2 per cent).

Graph 3-11 – International comparison of access penetration rates (No. of accesses per 100 inhabitants)



Source: ITU, ICP-ANACOM, Eurostat

3.4.2. Amount of service users

In 2006 there was a 3.6 increase in direct access customers. Indirect access customers decreased 8.5 per cent, in the case of pre-selection, and 32.4 per cent in the case of call-by-call selection.

Nomadic VoIP customers were registered for the first time. However this FTS mode still represents a very small number of customers.

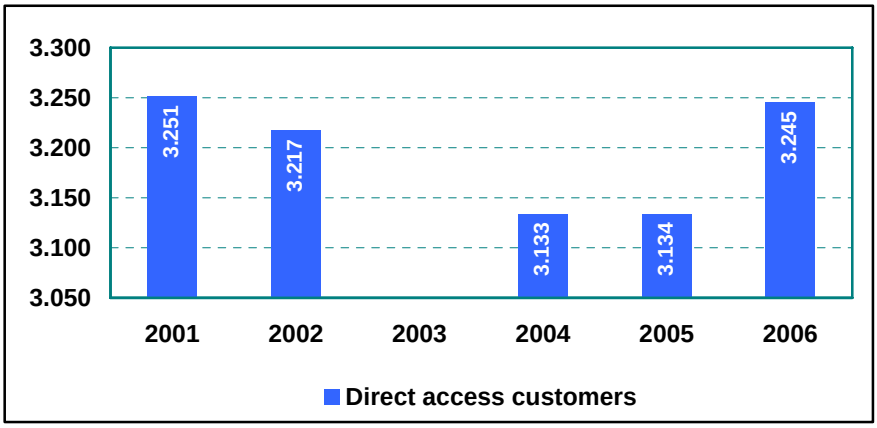
Table 3-12 – Amount of FTS customers

	2005	2006	2005/2006 var. (%)	2001/2006 average yearly var. (%)	2001/2006 var. (%)
Direct access customers	3,133,980	3,245,313	3.6%	0.0%	-0.2%
Pre-selection	470,107	429,935	-8.5%	2.0%	10.3%
Call-by-call selection	101,602	68,657	-32.4%	3.8%	20.8%
Nomadic VoIP	0	3,426			

Source: ICP-ANACOM Unit: 1 Customer, %
* Includes Direct Access customers with active SLRO.

The increase in the amount of direct access customer recorded in 2006 is contrary to the downward trend that has been registered since 2002. This mainly resulted from the offers of alternative providers using GSM technology and from package offerings, which showed up on the market.

Graph 3-12 – Evolution of the amount of direct access customers



Source: ICP-ANACOM Unit: thousands of customers

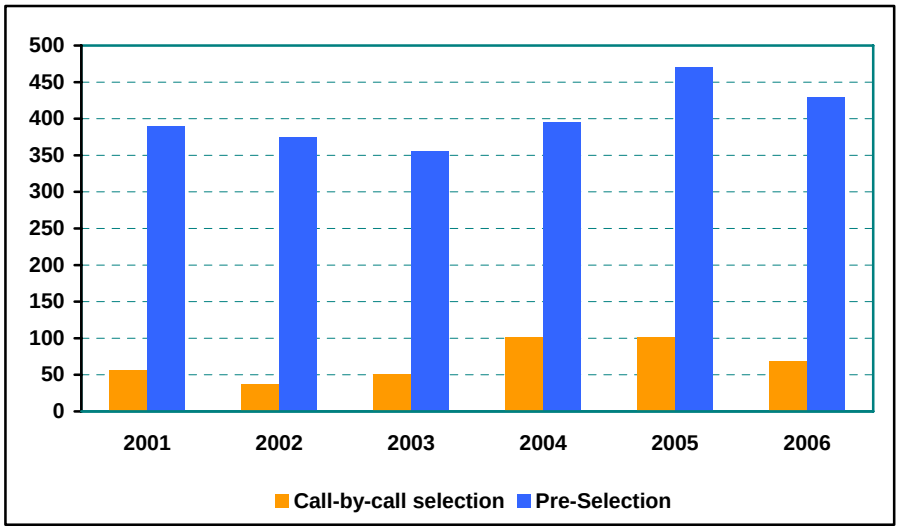
On the other hand, indirect access customers, after a considerable increase during the first two year after liberalization – when it was the main means of

access used by the alternative providers to enter these markets – suffered an important decrease between 2001 and 2003. This evolution was explained by the new operators' investment on new business models with better profit expectations (e.g. the package offerings based on direct access, namely those based on the RUO).

A new provider entered these markets by the end of 2003, giving a new strength to the indirect service offer. The amount of customers rose considerably since then.

2006 registered a reversion of the previously described trend. These variations are justified by the increase in the offerings of alternative operators in the direct access mode. The development of the SLRO (in the case of call-by-call pre-selection), the new optional plans launched by the incumbent operator and strategic changes made by one of the alternative operators may have affected this evolution.

Table 3-13 – Evolution of the amount of direct access customers



Source: ICP-ANACOM Unit: thousands of customers

In this context it should be mentioned that at the end of 4Q06, more than 142 thousand customers used the SLRO. One alternative operator only is responsible for more than 90 per cent of customers with an active SLRO.

3.4.3. Service usage level

Below is the evolution of the service usage level concerning accesses, traffic and revenues.

Accesses

By the end of 2006, there were about 4.2 million mains accesses installed, a figure slightly above that of a year before. This relative stability in the amount of accesses is explained by and increase of about 14.4 per cent in the number of digital accesses. On the other hand this increase in the amount of digital accesses resulted from the installation, during 2006, of 132 thousand new accesses using GSM technology. This increase reduced the fall recorded in the analogue accesses and in the amount of public payphones installed.

Table 3-14 – Amount of equivalent accesses installed

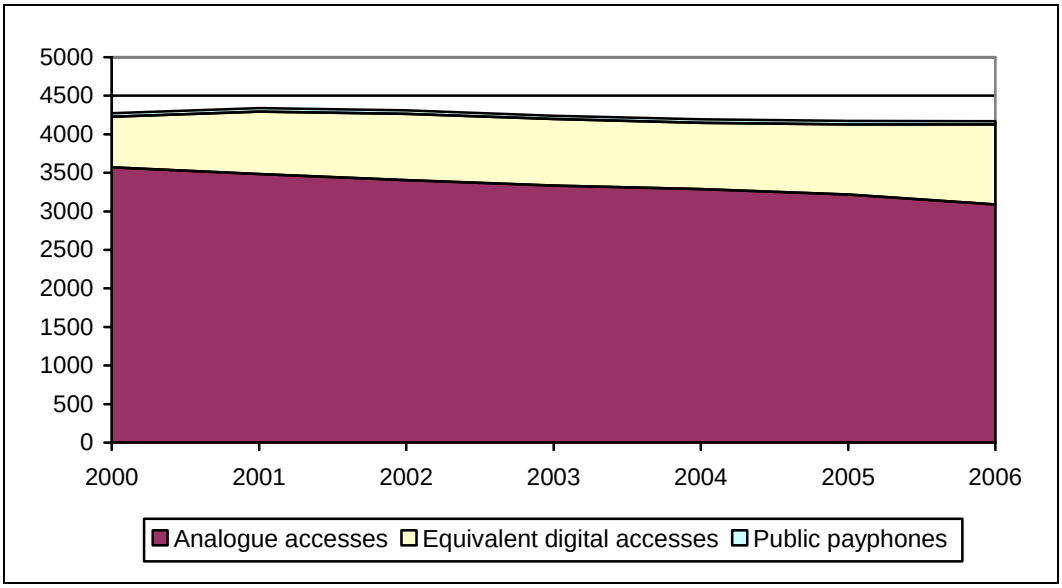
	2005	2006	2005/2006 var. (%)	2000/2006 average yearly var. (%)	2000/2006 var. (%)
Total main accesses*	4,233,701	4,233,954	0.01%	-0.2%	-1.0%
Accesses installed at customer request	4,127,459	4,128,011	-0.01%	-0.4%	-2.3%
Analogue accesses	3,219,657	3,089,974	-4.0%	-2.4%	-13.5%
Equivalent digital accesses	907,802	1,038,037	14.4%	8.0%	58.3%
Public payphones	45,334	43,233	-4.6%	-1.6%	-9.4%

Source: ICP-ANACOM Unit: 1 access, %

*Includes accesses installed at customer request, own stock and public payphones.

Since 2001 there is a trend reducing the amount of analogue accesses installed at customer request (-2.3 per cent between the end of 2000 and 2006), which may be linked to some of the factors mentioned in section 3.3.3.

Table 3-15 – Evolution in the amount of accesses



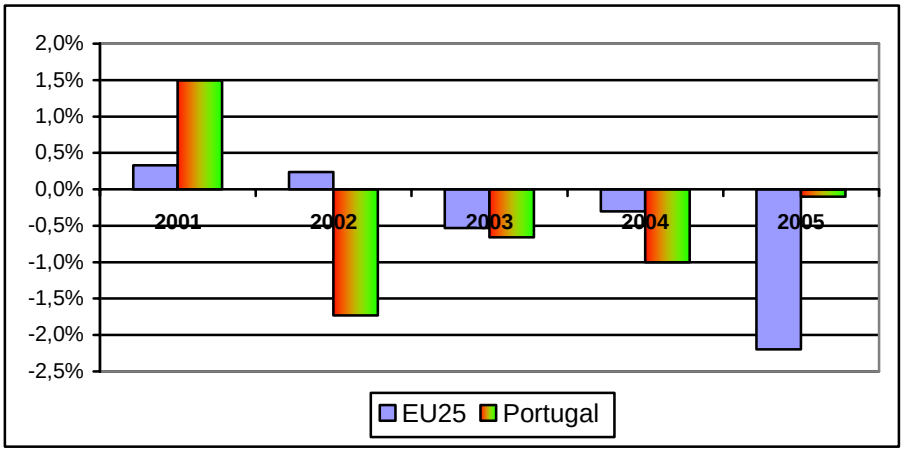
Source: ICP-ANACOM Unit: thousands of customers

The investment made by alternative operators on the local network was not enough to reverse the described trend. New operators mostly decided to enter the market using indirect access or local loop unbundling regulated offers. Cabovisão was the exception, having invested quite early on a multiple play strategy supported on its cable TV distribution network, and becoming the second biggest provider of the fixed telephone network access service.

The successive increase of digital accesses is firstly explained by the launch of traditional digital access offers, mainly targeted at business segments, and currently by the above-mentioned offers based on GSM.

The decrease in the amount of accesses in Portugal had been stronger than in the remaining EU countries. However, in 2005, already because of the GSM-based offers, the decrease in the amount of accesses recorded in Portugal was quite below that of Europe.

Graph 3-13 – Evolution of the amount of accesses in the EU and in Portugal



Source: ITU

Traffic

2006 was characterized by a considerable fall in traffic originated in the fixed network. The strongest decrease was recorded in the Internet access traffic (-47 per cent in minutes and -38 per cent in calls), and was induced by the expansion of broadband Internet. Voice traffic decreased -4 per cent in 2006, in line with other years.

Table 3-16 – Traffic originated on the fixed network (minutes)

	2005	2006	2005/2006 var. (%)	2000/2006 average yearly var. (%)	2000/2006 var. (%)
Total traffic (voice + Internet+ VoIP)	10,270	9,050	-11.9%	-9.4%	-44.9%
Voice traffic	8,385	8,050	-4.0%	-4.8%	-25.3%
National traffic (voice)	7,794	7,500	-4.2%	-5.1%	-27.0%
National fixed-to-fixed traffic	6,575	6,345	-3.9%	-5.6%	-29.2%
National fixed-to-mobile traffic	1,220	1,155	-5.5%	-2.2%	-12.3%
International outgoing traffic	591	550	-7.2%	1.4%	8.9%
Internet access traffic	1,884	997	-46.8%	-25.1%	-82.3%
VoIP traffic		3.4			

Source: ICP-ANACOM

Unit: thousands of minutes, %

Table 3-17 – Traffic originated in the fixed network (calls)

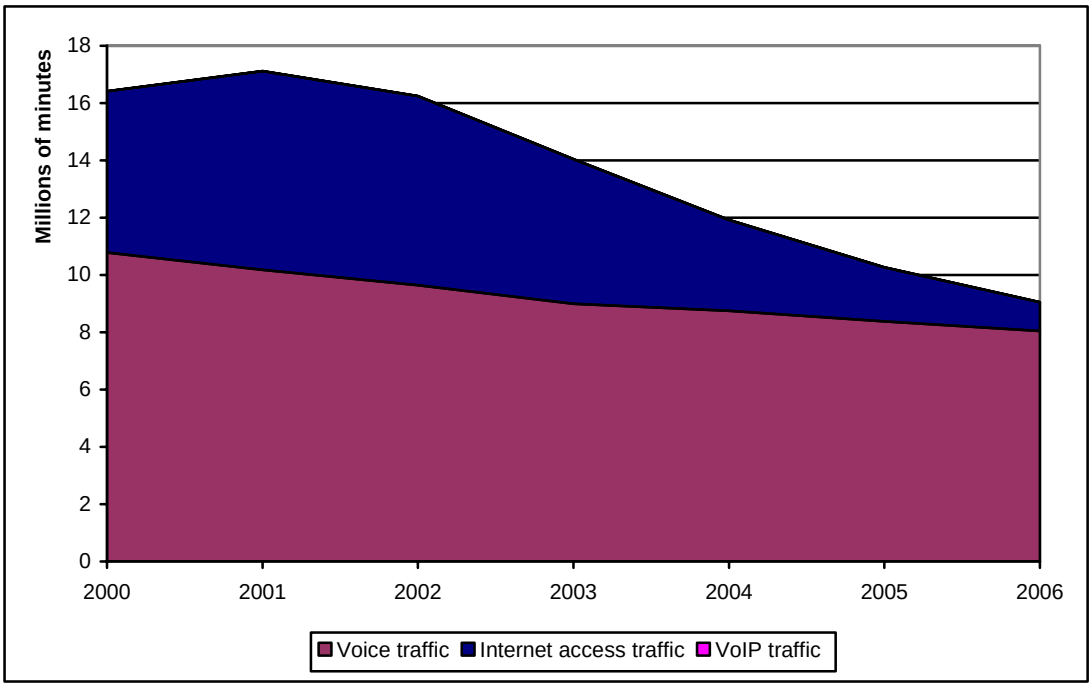
	2005	2006	2005/2006 var. (%)	2000/2006 average yearly var. (%)	2000/2006 var. (%)
Total traffic (voice + Internet + VoIP)	3,228	2,979	-7.7%	-6.7%	-33.9%
Voice traffic	3,134	2,920	-6.8%	-5.9%	-30.5%
National traffic (voice)	3,000	2,796	-6.8%	-6.0%	-30.9%
National fixed-to-fixed traffic	2,340	2,181	-6.8%	-6.4%	-32.5%
National fixed-to-mobile traffic	660	615	-6.8%	-4.5%	-24.3%
International outgoing traffic	134	124	-7.3%	-3.6%	-19.8%
Internet access traffic	94	58	-38.0%	-24.3%	-81.1%
VoIP traffic		1.4			

Source: ICP-ANACOM

Unit: thousands of calls, %

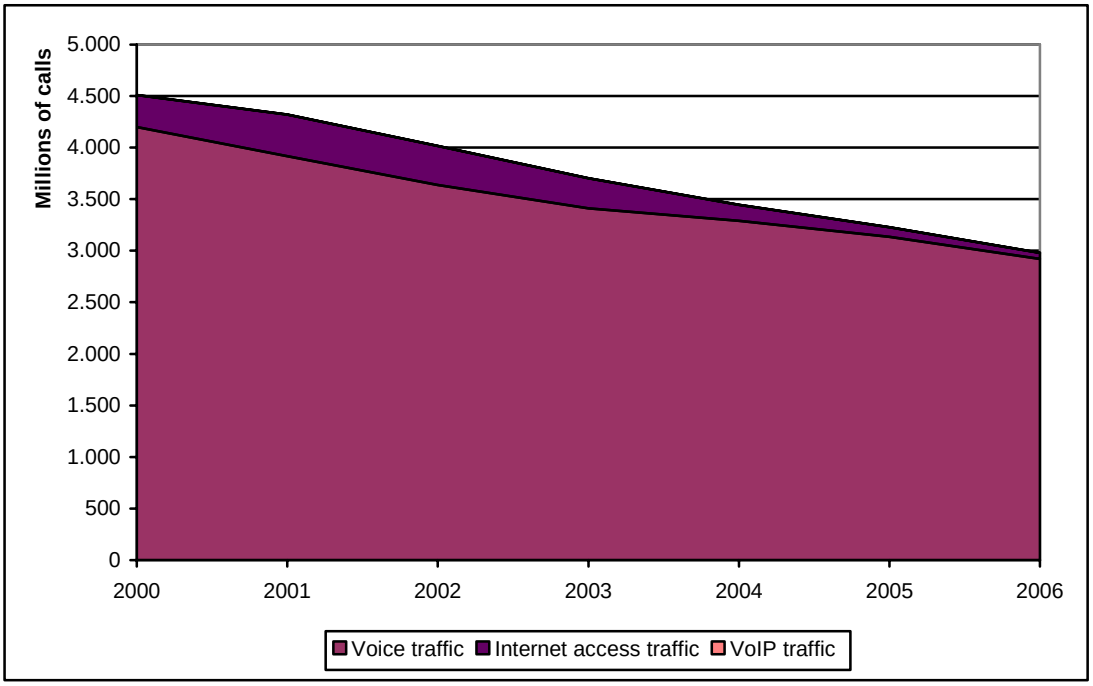
Voice traffic has been decreasing since 2000. In cumulated terms, the amount of minutes decreased 25 per cent and the volume of calls decreased 30 per cent.

Graph 3-14 – Traffic originated on the fixe network (minutes)



Source: ICP-ANACOM

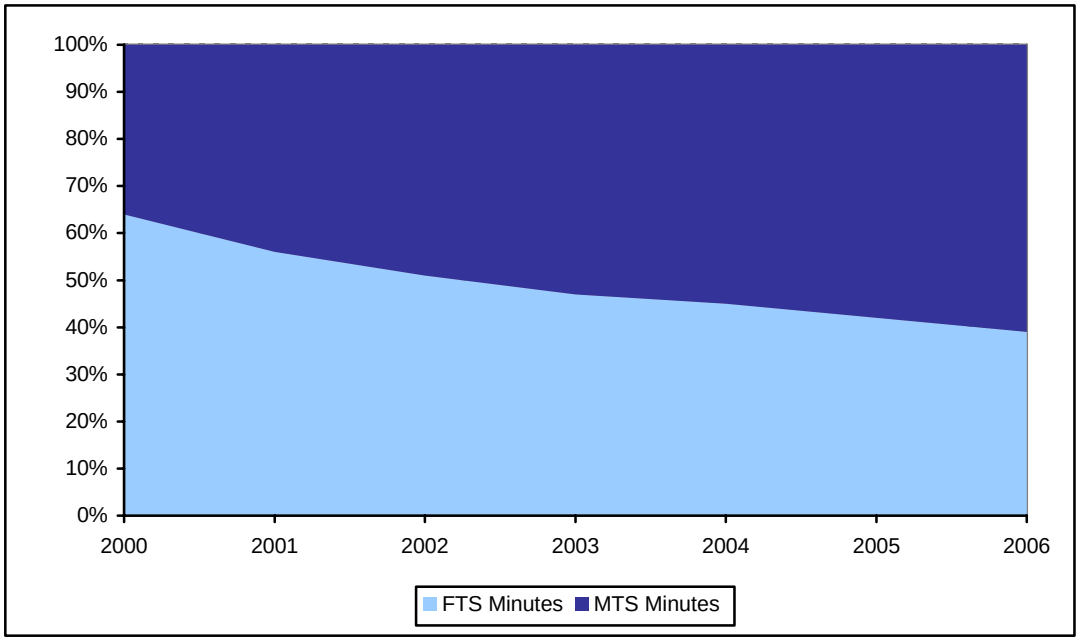
Graph 3-15 – Traffic originated in the fixed network (calls)



Source: ICP-ANACOM

This trend of decreasing traffic is linked to the phenomenon named fixed-by-mobile replacement. This factor caused the intensification of voice traffic on mobile networks, to the detriment of the fixed network. Mobile traffic already stands for 60 per cent of the overall voice traffic. (The following fact should be stressed out, however: when data traffic is taken into account, the amount of minutes routed in the fixed network is higher than the one routed in mobile networks).

Graph 3-16 – Distribution of voice traffic originated in the fixed and mobile networks



Source: ICP-ANACOM

The amount of international calls originated in the fixed network decreased 7.3 per cent in 2006. This evolution was mainly driven by a situation occurred with an alternative provider and is not repeatable. If that provider's traffic were to be removed, international traffic would evolve according to the average of the latest years.

Indirect access traffic

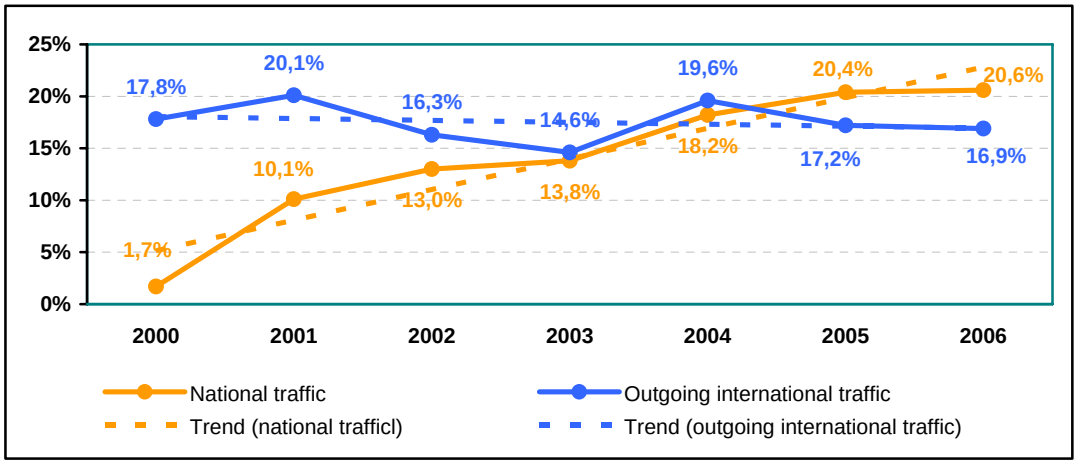
Notwithstanding the upward trend of traffic routed in the indirect access modalities, 2006 registered a decrease in this type of traffic (-3.7 per cent of calls and -3,4 per cent of minutes).

The generalized drop of indirect access traffic goes together with the decrease in the amount of customers of these offerings, the demand for new business models, and the strategic focus of some of the main operators, and the incumbent operator's investment on alternative tariff schemes.

Indirect access traffic stands for about 20 per cent of all traffic.

The importance of national indirect access traffic grew considerably during the latest years, following these offerings' commercial success.

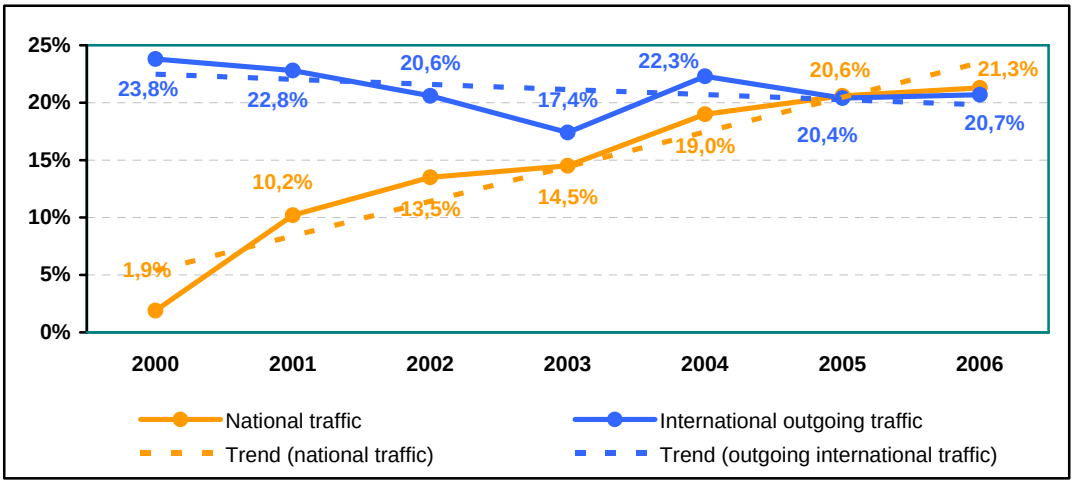
Graph 3-17 – Evolution of the rate of traffic routed using indirect access modes (minutes)



Source: ICP-ANACOM

Regarding outgoing international traffic, in 2006 this kind of traffic stood for about 16.9 per cent of total conversation minutes and 20.7 per cent of all calls. Indirect access became an important alternative to direct access right after this service's liberalization. However, between 2002 and 2003 indirect access international traffic decreased due the lack of alternative operators' investment on this segment. In 2004, with the emergence of a new provider with quite aggressive offers, there was again an increase in the use of this means of access. The evolution occurred during 2006 was influenced by these factors.

Graph 3-18 – Evolution of the rate of traffic routed using indirect access modalities (calls)



Source: ICP-ANACOM

Average traffic per customer

Average traffic per direct access customer decreased considerably since the first years of sector's liberalization. This process is mostly driven by the decrease of dial-up traffic and the decrease of voice traffic to fixed numbers. A certain stability of the fixed-to-mobile traffic and the international one should also be highlighted.

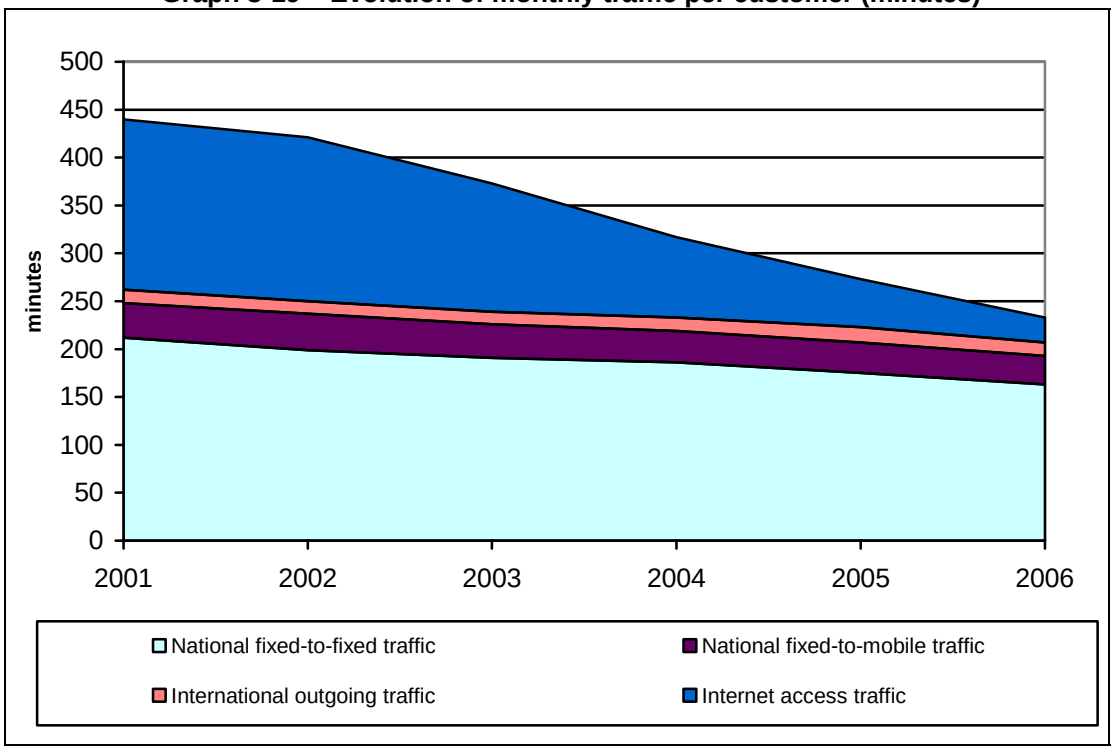
Table 3-18 – Monthly traffic per direct Access customer (minutes)

	2005	2006	2005/2006 var. (%)	2001/2006 average yearly var. (%)	2001/2006 var. (%)
Total traffic (voice + Internet)	273	232	-14.9%	-11.9%	-47.1%
Voice traffic	223	207	-7.3%	-4.6%	-20.8%
National traffic (voice)	207	193	-7.1%	-4.9%	-22.2%
National fixed-to-fixed traffic	175	163	-6.8%	-5.1%	-23.0%
National fixed-to-mobile traffic	32	30	-8.6%	-3.7%	-17.4%
International outgoing traffic	16	14	-10.3%	0.9%	4.5%
Internet access traffic	50	26	-48.9%	-32.1%	-85.6%

Source: ICP-ANACOM

Unit: minutes, %

Graph 3-19 – Evolution of monthly traffic per customer (minutes)



Source: ICP-ANACOM

Revenues

The strong decrease in traffic, decreasing prices and the decrease in the amount of customers are the factors responsible for the downward trend of FTS's revenues.

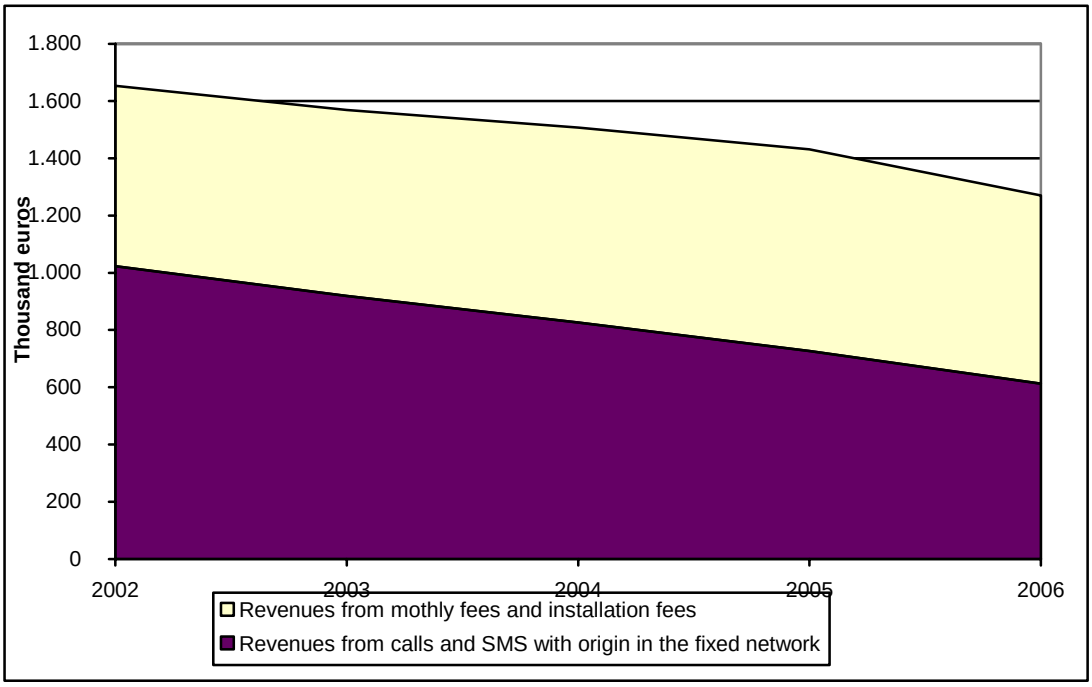
In 2006, total revenues decreased about 11 per cent, while traffic revenues decreased 15.6 per cent, and the installation and monthly fee decrease 6.7 per cent.

Table 3-19 – STF revenues

	2005	2006	2005/2006 var. (%)	2002/2006 average yearly var. (%)	2002/2006 var. (%)
Total revenues	1,431,351	1,270,383	-11.2%	-6.4%	-23.2%
Revenues from monthly fees and installation fess	704,473	657,262	-6.7%	1.1%	4.3%
Revenues from calls and SMS with origin on the fixed network[18]	726,877	613,121	-15.6%	-12.0%	-40.1%

Source: ICP-ANACOM Unit: thousands of Euros, %

Graph 3-20 – Evolution of FTS Revenues



Source: ICP-ANACOM

In 2006, for the first time since 2002, there was a decrease in the revenues linked to the installation and monthly fee. During the first years of the period under review, this type of offers suffered an increase as a result of the tariff re-balancing implemented by PTC. In 2006, the fall of the average prices charged by PTC and of the subscription by this company's former customers to offerings from alternative providers based on the SLRO and on their own or rented infrastructure – offerings with a lower monthly fee than PTC's – caused a drop

[18] Includes revenues from local communications traffic, regional and national, fixed-to-mobile calls (with origin in the fixed network), international outgoing traffic with origin in the fixed network, and SMS with origin in the fixed network.

in this kind of revenues.

3.4.4. Service price level

Below is the evolution of the incumbent operator's prices and an international comparison of prices in 2006.

Evolution of the incumbent operator's price index

In 2006, the incumbent operator did not change its tariffs. However, although this tariff scheme was not modified, there was a variation in terms of average monthly prices since the previous tariff entered into force in July 2005 (it was in force during the 12 months of 2006, but only 6 months in 2005). Thus, in 2006, in terms of annual averages, local call prices decreased 3.2 per cent, regional call prices decreased 15 per cent, and the price of national calls decreased 16 per cent. The prices of monthly fees and installation stabilized.

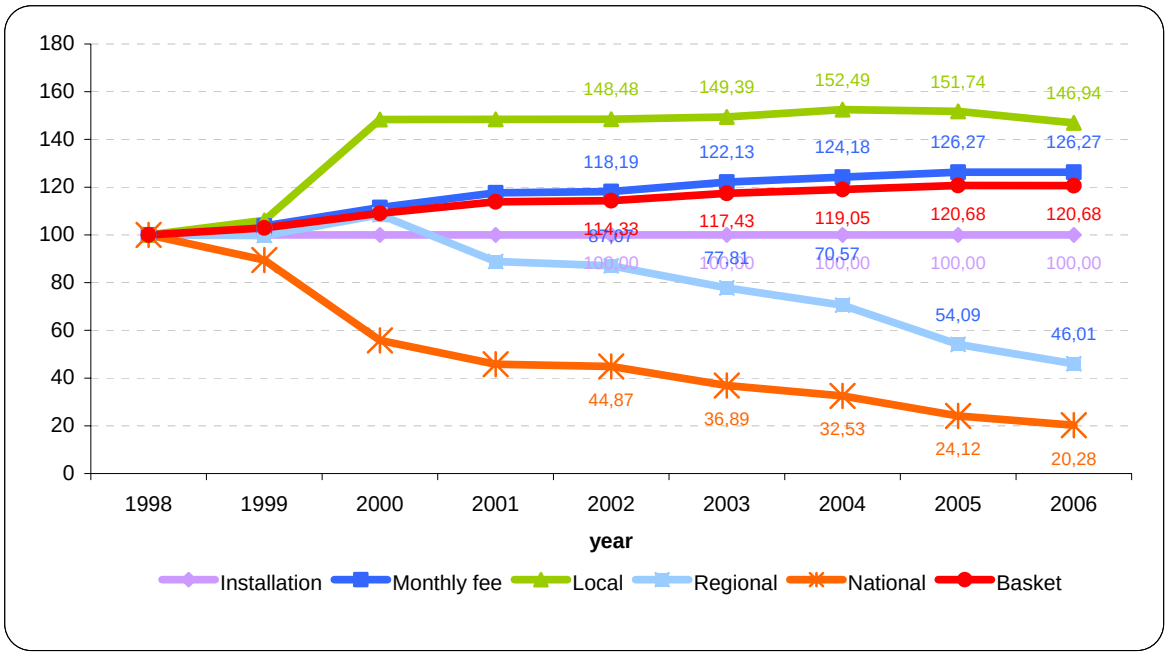
Comparing to the year of the sector's liberalization, the incumbent operator's price basket increased around 10.7 per cent in nominal terms. However, it should be stressed out that a regional or national call's cost in 2006, in nominal terms, was less than half of one similar call in 2000.

Table 3-20 – Incumbent operator's nominal price index

	2005	2006	2005/2006 Var. (%)	2000/2006 average yearly var. (%)	2000/2006 var. (%)
Installation	100.0	100.0	0.0%	0.0%	0.0%
Monthly fee	126.3	126.3	0.0%	2.1%	13.3%
Local	151.7	146.9	-3.2%	-0.2%	-1.0%
Regional	54.1	46.0	-14.9%	-13.3%	-57.6%
National	24.1	20.3	-15.9%	-15.5%	-63.7%
Basket	120.7	120.7	0.0%	1.7%	10.7%

Source: ICP-ANACOM
Note: 1998=100

Graph 3-21 – Evolution of FTS prices – nominal prices



Source: ICP-ANACOM

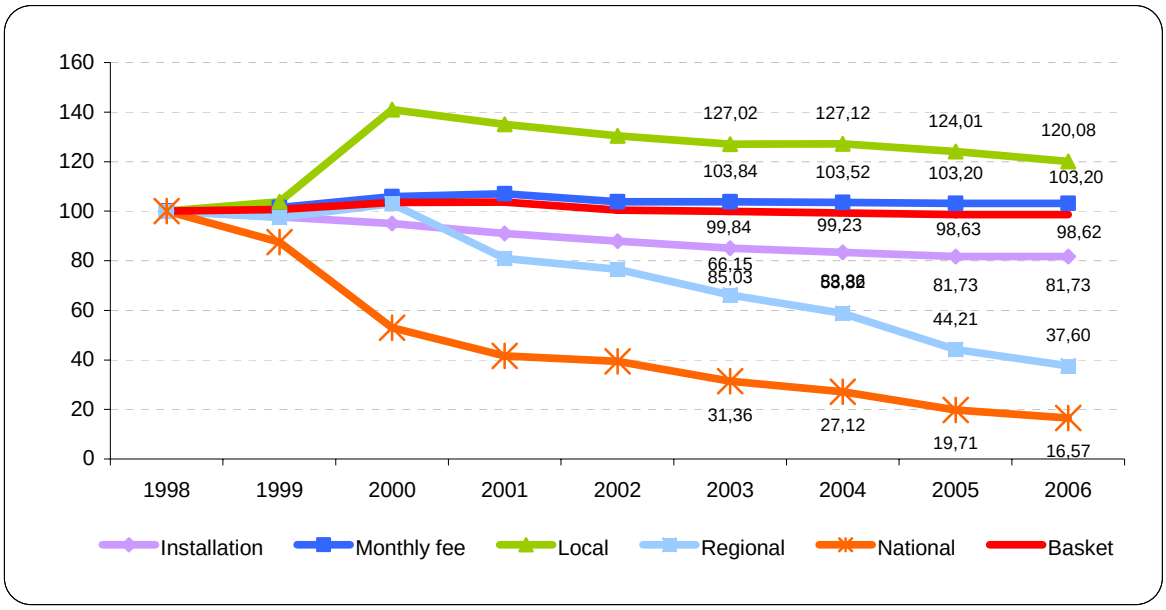
Since 2000 there was a generalized decrease in the real price of calls to the several traffic destinations. In fact, the incumbent operator's price basket registered a 4.8 decrease in real terms between 2000 and 2006. Regarding the monthly fee and service installation, during that period, there was a 2.5 and 14 per cent decrease, respectively.

Table 3-21 – Incumbent operator's real price index

	2005	2006	2005/2006 Var. (%)	2000/2006 average yearly var. (%)	2000/2006 var. (%)
Installation	81.7	81.7	0.0%	-2.5%	-14.0%
Monthly fee	103.2	103.2	0.0%	-0.4%	-2.5%
Local	124.0	120.1	-3.2%	-2.6%	-14.8%
Regional	44.2	37.6	-14.9%	-15.5%	-63.5%
National	19.7	16.6	-15.9%	-17.6%	-68.7%
Basket	98.6	98.6	0.0%	-0.8%	-4.8%

Source: ICP-ANACOM
Note: 1998=100

Graph 3-22 – Evolution of FTS prices – real prices

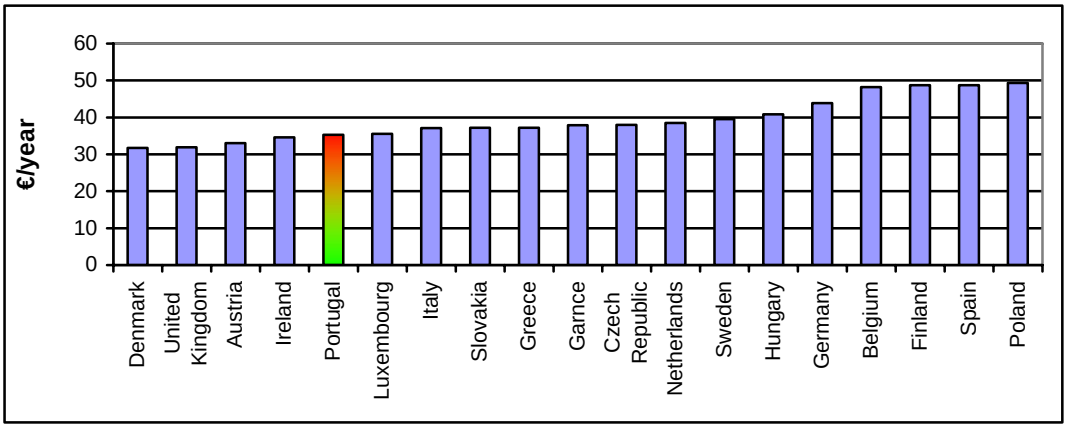


Source: ICP-ANACOM

Fixed-to-mobile call prices

The incumbent operator's tariff for the fixed-to-mobile traffic that entered into force in July 2006 supposed a drop in the prices of calls with termination in mobile networks, imposed by ICP-ANACOM. In October 2006 there was a new drop in this interconnection tariff. With theses falls, Portugal goes up some stages in the European ranking of fixed-to-mobile tariffs.

Graph 3-23 – Price comparison of fixed-to-mobile tariffs – residential customers – EU19



Source: Teligen, November 2006.

International comparison of FTS prices

Below are international comparisons of FTS prices[19].

Regarding the annual average invoice (basket), prices paid by residential customers in Portugal are above the average price charged in the countries under analysis, for all consumption profiles considered.

However, regarding May 2006, the prices charged in Portugal converged to the European average.

Table 3-22 – International comparison of FTS prices – Residential Segment

	May 2006	Nov. 2006
Low Consumption		
Deviation from the average	5.0%	3.0%
Ranking	15	13
Average Consumption		
Deviation from the average	4.0%	2.4%
Ranking	11	11
High Consumption		
Deviation from the average	7.5%	6.2%
Ranking	13	13

Source: Teligen, OCDE, ICP-ANACOM

In the case with the residential segment, the prices practiced in Portugal continue to be below the European average in the installation, monthly fee and calls to mobile numbers components, and above the average in the components of calls to national fixed numbers and calls to international numbers.

[19] OECD's usage profiles/baskets were taken into account. Values are in Euros and correspond to annual invoices, without VAT, and market currency rates were used to convert princes into Euros (i.e., purchasing power parity was not used). The currency rates are collected by OECD. The figures for the residential segment do not include discounts and promotions, while these were included in the business segment. The average is reckoned with the results of the 19 EU countries taken into account by the OECD.

Table 3-23 – International comparison of FTS prices (II)

	Low Consumption	Average Consumption	High Consumption
Installation and monthly fee			
Annual expenses with installation and monthly fee	166.3 €	166.3 €	166.3 €
Deviation from the average	-2.0%	-7.5%	-28.8%
EU19 Ranking	10	9	6
National calls			
Annual expenses with national calls	69.4 €	141.5 €	232.44 €
Deviation from the average	15.5%	26.7%	97.9%
EU19 Ranking	15	15	15
Fixed-to-mobile calls			
Annual expenses with fixed-to-mobile calls	31.12 €	75.26 €	202.61 €
Deviation from the average	-16.8%	-15.7%	-14.7%
EU19 Ranking	2	3	4
International calls			
Annual expenses with international calls	37.58 €	30.06 €	120.24 €
Deviation from the average	32.2%	32.7%	31.8%
EU19 Ranking	16	16	15

Source: Teligen, OCDE, ICP-ANACOM

Concerning the business segment, in the SOHO (Small Office, Home Office) segment the prices charged in Portugal are in line with EU's average.

In the SME (Small and Medium Enterprise) segment, results are less favourable. In this case, prices practiced in Portugal rank 14th, and these customers' average invoice is 10.9 per cent above the average of the remaining countries under analysis.

Regarding the prices charged in May 2006, prices practiced in Portugal have been converging with the average prices practiced in the EU.

Table 3-24 – International comparison of FTS prices –Business Segment

	May 2006	Nov. 2006
SOHO		
Deviation from the average	1,3%	-1,3%
Ranking	11	11
SME		
Deviation from the average	13,2%	10,9%
Ranking	14	14

Source: Teligen, OCDE, ICP-ANACOM

In the business segment, prices charged in Portugal continue to be below the European average in the components of installation, monthly fee and calls to mobile numbers, and above the average in the components of calls to fixed numbers and calls to international numbers.

In calls to mobile networks, Portuguese tariff schemes are the most competitive ones.

Table 3-25 – International comparison of FTS prices – Business Segment (II)

	SOHO	SME
Installation and monthly fee		
Annual expenses with installation and monthly fee	174,57 €	5 236,98 €
Deviation from the average	-15.8%	-24.6%
EU19 Ranking	8	6
National calls		
Annual expenses with national calls	133,3 €	6 597,97 €
Deviation from the average	21.9%	33.4%
EU19 Ranking	13	14
Fixed-to-mobile calls		
Annual expenses with fixed-to-mobile calls	117,18 €	3 751,17 €
Deviation from the average	-25.4%	-26.3%
EU19 Ranking	1	1
International calls		
Annual expenses with international calls	56,31 €	5 255,5 €
Deviation from the average	53.9%	54.5%
EU19 Ranking	18	18

Source: Teligen, OCDE, ICP-ANACOM

3.4.5. Evaluation by consumers

In general, FTS has high satisfaction levels. According to the most recent survey on the use of electronic communications[16], 95 per cent of users were satisfied with the service's overall quality.

Table 3-26 – Evaluation of the FTS' overall quality

Very good	5.2%
Good	89.7%
Bad	4.6%
Very bad	0.5%

Source: ICP-ANACOM, Survey on the use of electronic communications – 2006

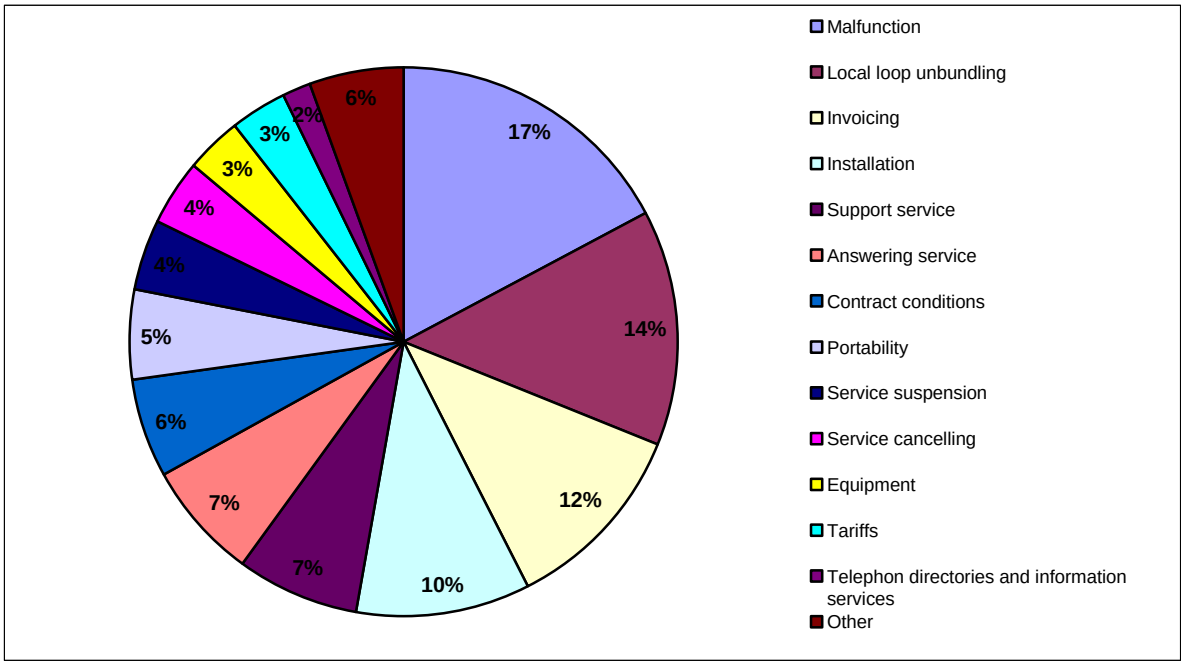
Regarding consumer satisfaction with FTS prices, the evaluation is less positive, since 49 per cent of those interviewed said they were not satisfied with the prices.

Another consumer satisfaction indicator is the number of complaints.

ICP-ANACOM´s Mission Unit for the Handling of Market Requests (UM-TSM) received during 2006, about 3,085 complaints regarding the FTS service and its operators. It also received 3,179 information requests and 5 suggestions regarding this service.

According to the following graph, it is possible to see that most of those complaints are linked to malfunctions (17 per cent) and the delay in local loop unbundling (14 per cent). Figures regarding issues linked to the service's invoicing (12 per cent) and installation (10 per cent) also represent an important part of the complaints presented.

Graph 3-24 – Distribution of requests by area – 2006



Source: ICP-ANACOM

The “Other” item includes complaints on selection and pre-selection of calls, service break down, infrastructure, prices, privacy, complaint book, interference, numbering and municipal taxes for passage rights.

3.4.6. Development of competition and change of operator

In 2006, the share of accesses installed by request of Group PT’s customers decreased 11 per cent, the greatest drop recorded since the beginning of liberalization. (It should be mentioned that the accesses with SLRO were taken into account as direct access from the alternative providers. Should this option not have been taken, the decrease of Group PT’s access share would be 7.4 per cent. This way of presenting the results does not intend to anticipate any analysis that may be made in the scope of defining relevant markets.)

Since the end of 2000, Group PT lost 21.1 per cent of the total access share.

Table 3-27 – Group PT’s access shares

	2000	2001	2002	2003	2004	2005	2006
Main telephone access	99.7%	98.1%	95.3%	94.4%	93.3%	89.3%	78.6%
Accesses installed at customer request	99.7%	98.1%	95.2%	94.3%	93.2%	89.0%	78.1%
Analogue accesses	99.9%	98.3%	95.4%	94.6%	93.9%	91.3%	81.5%
Equivalent digital accesses	98.7%	97.1%	94.5%	93.2%	90.5%	81.1%	68.1%

Source: ICP-ANACOM

The evolution in the direct access customer share followed that of the access share. (Also in this case the customers with active SLRO were considered to be direct customers of the alternative operators). Indirect access continues to be mostly provided by alternative providers.

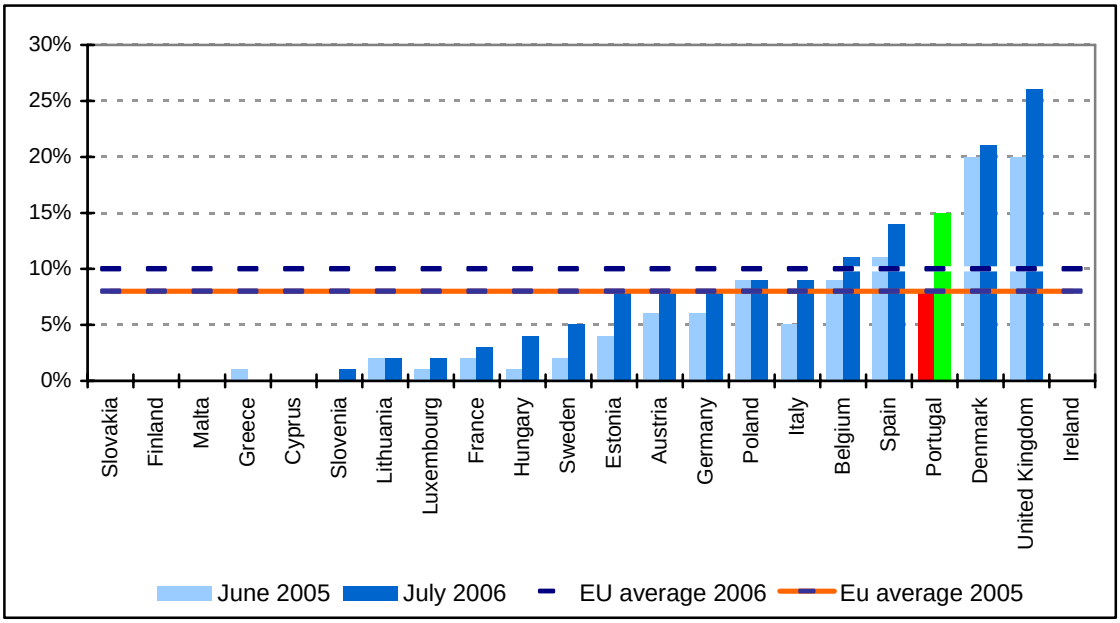
Table 3-28 – Group PT's customer shares

	2001	2002	2003	2004	2005	2006
Direct access customers	98.2%	95.1%	94.6%	93.8%	88.9%	76.5%
Indirect access customers						
Pre-selection	0.6%	0.6%	0.7%	0.7%	0.9%	1.3%
Call by call selection	0.4%	0.7%	0.4%	0.3%	0.4%	0.6%

Source: ICP-ANACOM

It should be mentioned that, according to the European Commission, the direct access customer share of alternative operators in Portugal is the third highest one among the considered countries.

Graph 3-25 – Direct Access customer share of alternative providers in the EU



Source: European Commission, 12th Implementation Report

Together with this evolution in accesses' and customer's market shares, number portability was also fostered. During 2006, ported geographic numbers maintained the growth trend, having grown about 68 per cent, a similar figure to the one recorded a year before. In absolute terms, ported numbers reached the amount of 446 thousand numbers, about 11 per cent of overall accesses.

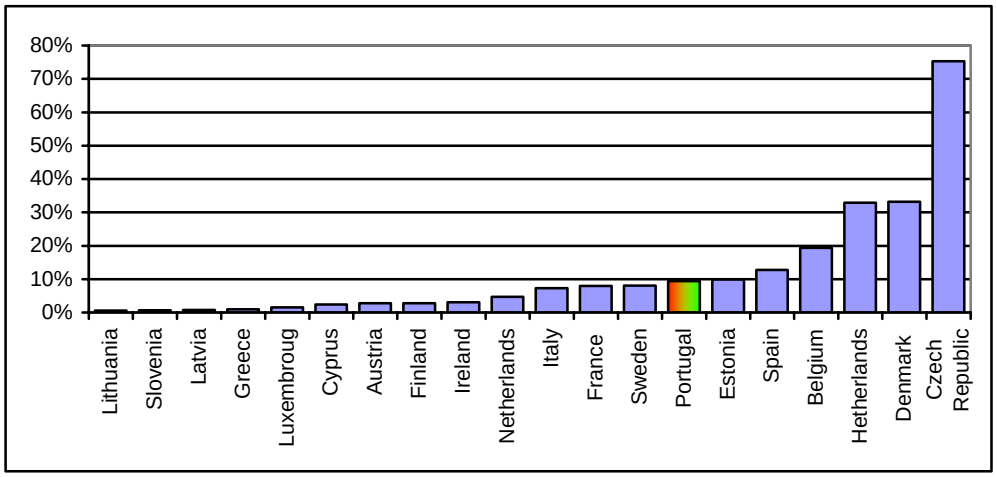
Table 3-29 – Ported numbers

	2001	2002	2003	2004	2005	2006
Geographic numbers	2,332	63,427	118,017	158,623	265,077	446,371
Non-geographic	6	145	214	277	351	571

Source: ICP-ANACOM Unit: 1 number

At the EU level, Portugal ranks in the middle of the list regarding ported numbers.

Graph 3-26 – Percentage of ported fixed numbers (October 2006)



Source: European Commission, 12th Implementation Report

Concerning traffic shares, since the beginning of liberalization, there has been a steady decrease in the rate of voice traffic routed by the incumbent operator.

Table 3-30 – Group PT's traffic shares (minutes)

	2000	2001	2002	2003	2004	2005	2006
Total traffic (voice + Internet)	98.2%	93.4%	90.5%	88.5%	83.7%	78.2%	73.4%
Voice traffic	97.3%	89.2%	84.3%	82.4%	78.1%	74.1%	71.0%
National traffic (voice)	98.0%	89.7%	84.4%	82.4%	78.1%	74.2%	70.6%
National fixed-to-fixed traffic	98.0%	89.8%	84.7%	82.6%	78.3%	74.4%	71.0%
National fixed-to-mobile traffic	98.0%	89.1%	83.0%	81.4%	76.8%	72.9%	68.3%
International outgoing traffic	82.0%	79.8%	81.5%	82.1%	77.4%	73.0%	76.4%
Internet access traffic	100.0%	99.6%	99.6%	99.5%	99.4%	96.3%	92.9%

Source: ICP-ANACOM

Table 3-31 – Group PT's traffic shares (calls)

	2000	2001	2002	2003	2004	2005	2006
Total traffic (voice + Internet)	97.3%	90.5%	85.0%	83.0%	78.2%	74.8%	71.2%
Voice traffic	97.1%	89.6%	83.6%	81.7%	77.3%	74.2%	70.9%
National traffic (voice)	97.9%	90.0%	83.8%	81.7%	77.3%	74.3%	70.8%
National fixed-to-fixed traffic	97.9%	89.9%	83.7%	81.5%	77.2%	74.3%	71.3%
National fixed-to-mobile traffic	98.0%	90.5%	84.2%	82.7%	78.0%	74.3%	69.2%
International outgoing traffic	76.1%	77.5%	78.0%	80.1%	75.4%	72.1%	72.5%
Internet access traffic	99.9%	99.7%	99.0%	99.0%	97.7%	93.8%	84.0%

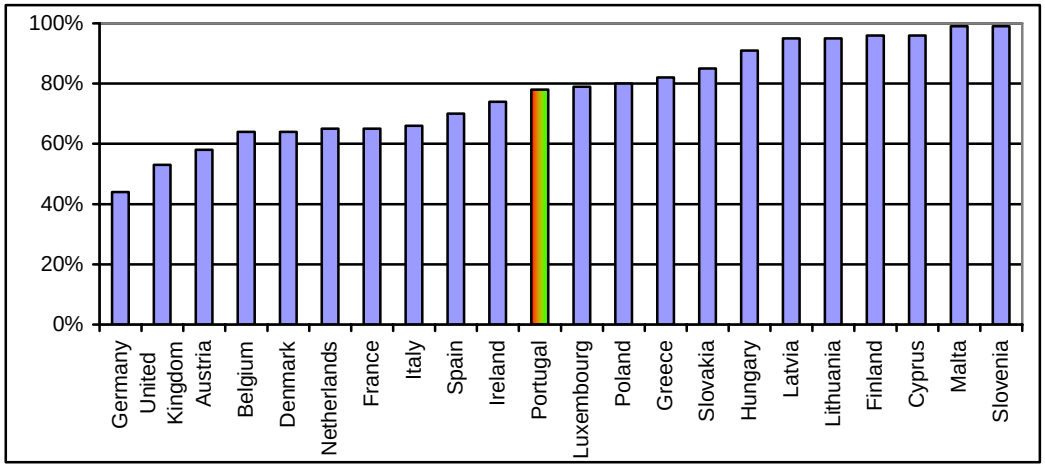
Source: ICP-ANACOM

Regarding national voice traffic destinations (mobile and fixed geographic), alternative providers were responsible in 2006 for about 30 per cent of the traffic, a figure about 4 per cent higher than that of 2005.

Regarding international outgoing traffic in 2006, the alternative providers market share was around 23.6 per cent of the routed minutes, and 27.5 per cent of the originated calls.

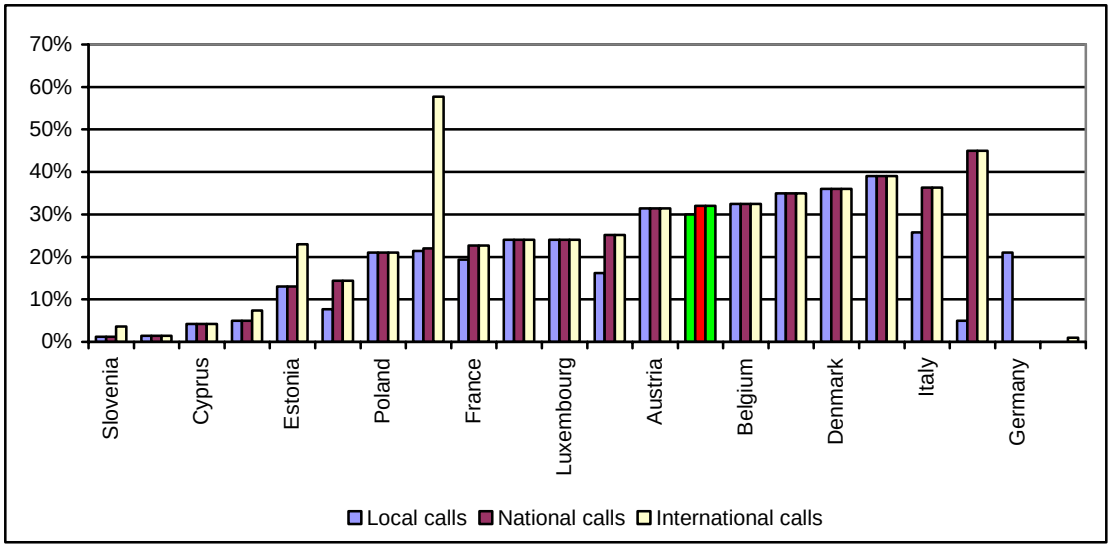
Comparing with the European Union, Portugal ranks in the middle concerning the traffic share of the incumbent operator and the rate of customers that use alternative providers to make calls.

Graph 3-27 – Traffic share of the incumbent operator in December 2005 (Minutes)



Source: European Commission, 12th Implementation Report

Graph 3-28 – Rate of subscribers using alternative providers to make fixed voice calls, July 2006



Source: European Commission, 12th Implementation Report

In terms of revenues, Group PT's share reached 80.3 per cent in 2006, 7.4 per cent less that a year before. This decrease results, namely, from the steady growth of subscription and installation revenues shares of the alternative providers, which stood at 13.4 per cent in 2006, while in 2002 it was still 0.4 per cent.

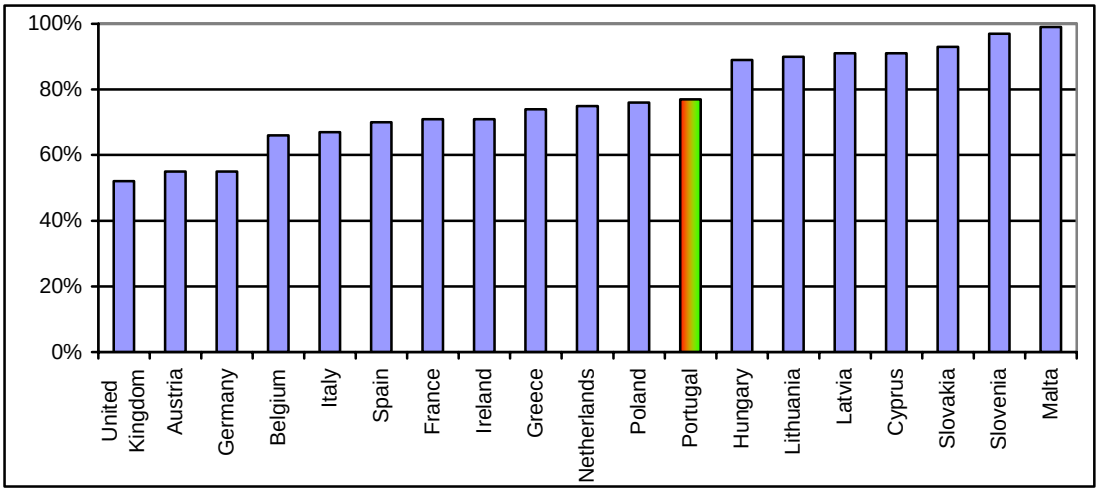
Table 3-32 – Group PT's FTS revenues share

	2002	2003	2004	2005	2006
Total revenues	90.8%	90.2%	88.6%	87.7%	80.3%
Revenues from monthly fess and installation taxes	99.6%	99.7%	98.5%	97.1%	86.6%
Revenues from calls and SMS with origin in the fixe network.	85.4%	83.5%	80.5%	78.5%	73.6%

Source: ICP-ANACOM

In international terms, in 2005, the incumbent operator's revenue share in Portugal is above the shares of incumbent operators of most of the considered EU countries.

Graph 3-29 – Revenue share of the incumbent operator in December 2005 (Revenues)



Source: European Commission, 12th Implementation Report.

The shown-above evolution of the market shares results from the previously mentioned explaining factors for the underlying variables. However, it is important to recall consumers' motives regarding the change of operator.

In this context, the main reasons for changing operator reside in the service's price level or in tariff-related reasons (lack of monthly fee). In particular, the "new operator does not charge monthly fee" motive grew 13 per cent regarding February 2006.

Table 3-33 – Motives for change of fixed operator (%)

	Dec-06
Not satisfied with the prices	48.9
The new operator does not charge monthly fee	19.0
Interested in experimenting new services/products	9.9
The former operator did no offer a package with the possibility of accessing to the Internet and TV	5.7
Not satisfied with the quality of service	5.6
The former operator did no offer a package with the possibility of accessing to the Internet	2.9
Most people contacted are customers of this new operators	2.4
Other answers	3.3
N.a.	2.2
Total	**100.0**

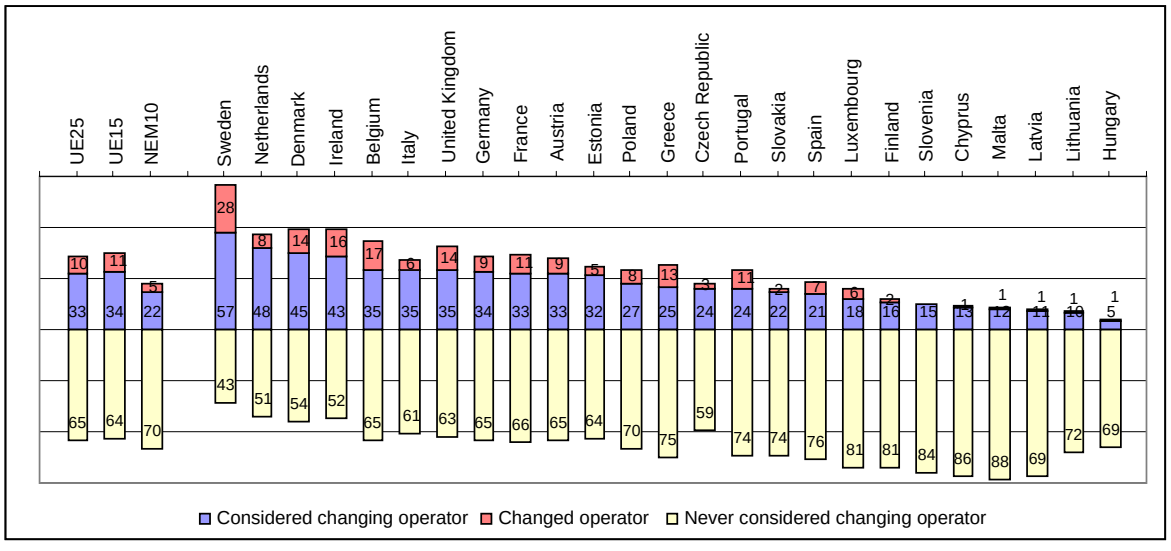
Source: ICP-ANACOM, Survey on the use of electronic communications - 2006.

Indeed, operators that launched offers without monthly fees (namely, based on GSM, on the cable TV distribution networks or on multiple play), and the providers that advertise their offers, such as indirect access, as being cheaper than the incumbent operator's ones, are the main responsible for the drop registered in the incumbent operator's access and traffic share (another relevant factor, in this scope, will be the decrease in the service's usage, under its traditional form).

On the other hand, these consumer motivations and the offerings launched by alternative operators to satisfy their needs also justify Group PT's revenue shares.

In terms of international comparisons, the rate of FTS customers that considered the possibility of changing operator is lower than the one recorded in the markets where the liberalization process started earlier. However, the rate of customers that really changed operator is above the European average.

Graph 3-30 – Fixed network operator change indicator in the EU



Source: European Commission, E-Communications Household Survey, July 2006. Unit: %