

United Kingdom

1. Country facts

1.1 Political Background

The United Kingdom is a constitutional monarchy, governed by a Prime Minister who is appointed by the King or Queen for a period of four years according to the result of the parliament's election. The Prime Minister is the Head of State and appoints a Cabinet and Secretaries of State (Ministers) giving account to the House of Commons.

The parliament is divided into two chambers. The House of Commons, or lower chamber, is elected on a direct majority system and is the main legislative actor. The House of Lords is an appointed chamber whose powers are limited to deliberation, revision of House of Commons' bills, scrutiny of government and administration, and acting as the ultimate Court of Appeal.

1.2 Demography¹

There were an estimated 58,836,700 people living in the United Kingdom in mid 2001. The UK ranks among the countries with a higher population density in Europe with 241.2 persons per square kilometers.

1.3 Telecom consumption habits

Table 1: Telecom consumption habits fixed telephony in the UK

Fixed voice telephony	1998	2000	2001
Number of subscribers	32,829,000	34,502,000	34,710,000
Penetration rate % of pop.	55.42%	58.86%	58.80%
Call minutes per capita	2'650.38	n.d.	5'279.12

Source ITU, World Market Research Center, Ofel Market research reports

Table 2: Telecom consumption habits mobile telephony in the UK

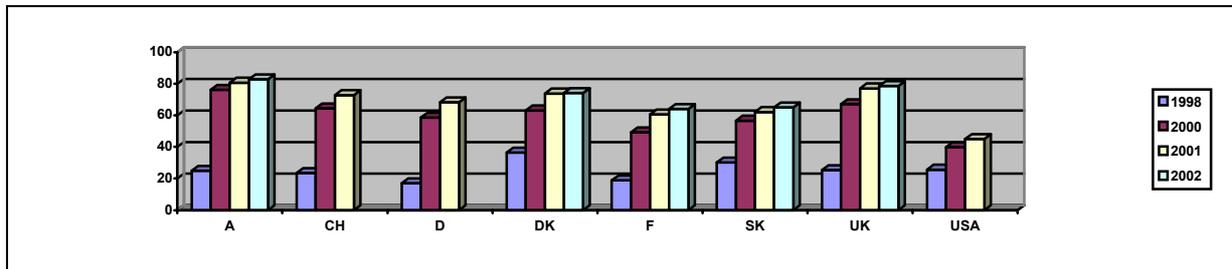
Mobile telephony	1998	2000	2002
Number of subscribers	13,000,000	40,049,000	44,932,000
Penetration rate % of pop.	25.23%	67%	78.05%
Call minutes per capita	153.35	n.d.	786.78

Source ITU, World Market Research Center, Ofel Market research reports

¹ Source UK National Statistics

In international comparison, the UK ranks rather high in terms of mobile penetration, as shown in the figure below.

Figure 1: Mobile telephony subscribers per 100 inhabitants, international comparison



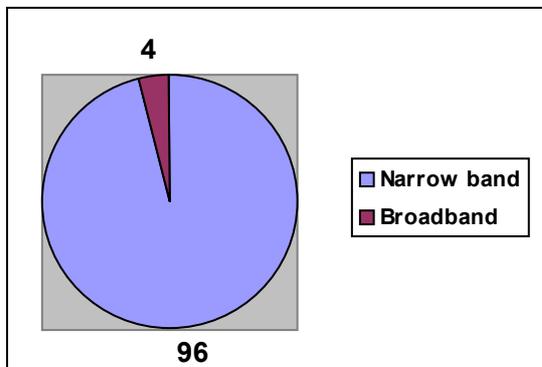
Source ITU

Table 3: Telecom consumption habits Internet in the UK

Internet	1998	2000	2001	2002
Penetration rate PC per 100 inhabitants	26.84%	33.78%	36.62%	n.d.
Internet users per 100 inhabitants	13.51%	30.12%	39.95%	50%
Surfing time per month/capita in hours	n.d.	n.d.	6.08	8.52

Sources NielsenNetratings.com and ITU

Figure 2: Narrow band and broadband penetration, mid 2002 (% Internet subscriptions) in the UK



Source: ITU

2. Brief telecom history

2.1 Historical background and liberalization process

The monopoly in communications in the UK (initially mainly letters and parcels) was legally established in the 17th century under a private companies licensing regime. In the early years of the 20th century, the non-renewals of licenses to private telephone companies initiated the nationalization of the telecommunications industry. Telecommunications were integrated into a governmental department in charge of postal services and telecommunications.

The Postal Act of 1969 transformed the ministerial department of postal services and telecommunications into a national company under the name of the Post Office. In 1981, the Telecommunication Act split the Post Office into two entities: Royal Mail and British Telecom (BT). This new law intended to introduce competition in telecommunications by means of a licensing mechanism for telecommunication services. Mercury (created for the purpose of introducing competition), as a subsidiary of Cable & Wireless (a privatized company), received the first license to exploit a telecommunication network and the related services in 1981. It only began to offer its first basic network services in 1986. The Telecommunications Law of 1981 had serious flaws: BT was not obliged to connect Mercury to its network, and Mercury was not allowed to dig up streets to install its cables and infrastructure.

The Telecommunication Act of 1984 corrected these flaws and initiated the privatization and liberalization process of the British telecommunications industry. This new Act introduced considerable innovations and reforms. It first initiated the privatization of BT by the sale of 50.2 percent of its equity and raised £3.9bn (5.77 billion €)² for the government. Secondly, it confirmed Mercury as the sole competitor to BT until 1991. Thirdly, it created Oftel (Office of Telecommunications) as the regulator of the telecommunication industry.

The period between 1984 and 1991 is known as the 'duopoly policy' phase. This seven-year period was intended to give Mercury the time to build its own network and to become a solid competitor to BT. This strategy largely failed. In 1991, BT had lost only 4% of its market share mainly in the profitable international business segment. As a consequence, the government undertook the so-called 'duopoly review' which resulted in the liberalization of the local and long distance markets for cable television operators, access providers (voice and data), utilities companies (electricity), and international simple resale operators.

In 1985, the first cellular operators BT Cellnet (now O2) and Vodafone began their commercial services. In 1993, two new operators, Orange and Mercury One to One were granted mobile licenses.

In 1990, the Broadcasting Act became effective. The Independent Television Commission (ITC) was given the powers to grant cable TV franchises and to monitor the broadcasting licenses.

In December 1991, the government sold 1,350 million BT shares and reduced its ownership to 25.8%. In 1993, the government sold its remaining shares in BT.

In June 1992, the Competition and Services (Utilities) Act became effective and gave powers to the Director General of Telecommunications (DGT) of Oftel to set quality standards in telecommunications.

In 1998, the new Competition Act increased the powers of the DGT in regards to competition regulation. Oftel can give fines (up to 10% of a company's turnover in the UK), enter the premises of the operators for investigations and give binding directions. Until today the DGT never exercised its financial sanction power. This new act represented the first step toward a

² See www.oanda.com, online money converter, exchange rate GBP - € = 1.4791, March 24, 2003

progressive shift from a sector specific regulation style to a more competition oriented one. Indeed, it gave concurrent powers to the DGT and the Director General of Fair Trading.

In 2003, the Communication Bill should be enacted and create Ofcom, the new super-regulator of the communication sector through the integration of five different regulatory authorities (see section 6.1.5) including Oftel.

2.2 Incumbent operator

With the Telecommunication Act of 1984, BT was transformed into a public limited company and partially privatized the same year in November. In 1991, the government reduced its participation to 25.8%. The remaining government's shares were sold in 1993.

Since November 2001, BT is a subsidiary of BT Group plc formed after the demerger of mobile operator O2. BT has now four lines of businesses: BT Retail, BT Wholesale, BT Ignite (network solutions) and Bt Openworld (Internet). BT has many international participations in data, mobile, internet and fixed lines operators through acquisitions or partnerships.

In 2002, BT group's turnover reached £18.4billion (27.2 billion €), an 8% increase to the prior year, while profits before taxes went down 28% to £1.3billion (1.92 billion €). In 2002, BT Group managed to halve the group's debt from £27.9billion (41.2 billion €) to £13.7billion (20.3 billion €), by selling assets and shareholdings of international operators.

Table 4: BT profile

Name	British Telecom (BT)		
Services	Fixed, Internet		
Date of entry	1981, privatized partially in 1984, 1991 and fully in 1993		
Ownership	100% BT plc		
Market shares	Subscribers	Call minutes	Revenues
Fixed lines			
Local calls		72.6%	69.2%
National calls		51.1%	57.8%
International calls		31.7%	50.5%
All calls		69.0%	61.2%
Internet			
Modem	Over 10 millions	n.d.	n.d.
ADSL	800'000		

Source : Oftel market information May 2003, BT 2003 report

2.3 Main competing operators

Table 5: Ownership and market shares of main operators in the UK

Name	Ownership	Market share (vol.)
Fixed telephony		
British Telecom (BT)	BT Group plc	69%
Cable & Wireless	C & W	2.8%
NTL & Telewest	NTL & Telewest	12.1%
Others		Approx. 16%
Mobile telephony		Subscribers
Orange	Orange Group	26.7%
Vodafone	Vodafone Group	24.5%
O2	mmO2 Group	23.9%
T-Mobile	T-Mobile Group	24.9%
Internet		
BT	BT Group	n.d.
Freeserve	France Telecom	n.d.
AOL	AOL	n.d.
NTL	NTL Telewest	n.d.

Sources : *Of tel Market UK Telecommunication Industry Market Information 2001/02, May 2003*

3. Legal framework

3.1 EU directives

Liberalization of the telecommunication sector in the UK took place a decade before the European telecom reforms. In many respects, and for a long time, the UK was an example, a source of experience and learning for the European institutions. It is only recently that the European framework started to affect the UK regulatory framework.

For instance, the new EU Communication Directives which became effective in April 2002, require that all member states transpose the directives by July 25, 2003. The new framework seeks to establish a consistent approach to the regulation of electronic communication network and services. It will have considerable implications for the UK: The creation of a new integrated regulator (Ofcom) and the disappearance of individual licenses (see section 6.1.5). The Communication Bill that will enact these changes is currently in discussion before the parliament.

3.2 General national framework for Telecommunications

The Telecommunication Act of 1984 sets the regulatory framework in the UK. New ad hoc acts have been adopted and have modified the regulatory framework over the years. However, the stability of the Telecommunication Act is largely due to the fact that in the UK the utility regulation, the main regulatory instrument, is the one license without which

operators cannot provide services. In fact, most regulatory decisions and actions by the regulatory authority refer to the enforcement of the licenses and very often require their modification. The UK regulatory framework is also characterized by the existence of powerful independent regulatory authorities whose discretionary powers are quite important.

The regulatory strategy laid down by the Telecommunications Act of 1984 focused on promoting infrastructure competition rather than service competition. The failure of this strategy, acknowledged after the “duopoly review” in 1991, led to a reorientation of the regulatory objectives. Even though the objective of infrastructure competition was not abandoned, a new focus was put on interconnection and services competition.

Table 6: Content of the Telecommunications Law in the UK, 1984

General provisions	The Telecommunication Act of 1984 paved the way for the privatization of BT and the liberalization of the sector. It also set the framework for the regulation of the sector.
Universal service	The Act of 1984 obliged BT to provide universal services obligations. These encompass the obligation to provide a basic level of service at average prices, the provision of public telephone boxes and schemes for low-income households.
Rates regulation	Price regulation is operated through the now well-known RPI-X price cap formula, in which RPI is the retail-price-index and X an efficiency factor. The result is that the operator cannot increase the average price of the regulated product (within a basket of services) above the percentage set by the formula during the four year period for which the formula is designed. The content of the basket has been considerably reduced over time (see section 4.5)
Interconnection regulation	Interconnection procedures were initially set under the supervision of Oftel via the BT license and via the arrangement between BT and Mercury throughout the 1980’s. It became a critical issue in the 1990’s and required heavier intervention of Oftel (see section 5.2.2).
Convergence	The Telecommunications Act of 1984 quite logically provided no measures relating to convergence of technologies. It is the duty of the new Communication Bill, which is still before the parliament, to address this issue (see section 6.1.5).

4. Key regulation actors

4.1 National Regulatory Agency (NRA)

The Office of Telecommunications (Oftel) was the first independent regulatory agency to be set up in the network industries in the UK. It was created in 1984, as a non-ministerial government department. Its Director General is appointed for a period of 5 years by the Secretary of State for Trade and Industry in charge of the corresponding ministry (DTI). The Director General of Telecommunications (DGT) is known as “the regulator”. He is the head of the regulatory authority and makes all the final decisions on its own. This post as been

occupied by three persons: Sir Bryan Carsberg (1984-1993), Don Cruikshank (1993-1998), and David Edmonds (1998-).

Oftel's duties are set by the Telecommunication Act of 1984 and the Fair Trading Act of 1973 and have been widened by the Competition and Service (Utilities) Act of 1992 and by the Competition Act of 1998. Oftel's duties result from a delegation of powers from the Department of Trade and Industry (DTI). The first general mission of the DGT is to enforce the licenses of the operators granted by the DTI. To do so, the DGT can order the operator to comply with the provisions of the license and can also modify the conditions of the license. There are two mechanisms to do this. The first is a voluntary agreement between the DGT and the operator. The second is a compulsory modification against the will of the licensee. The modification would then be enforced only after it has been reviewed and approved by the Competition Commission. In fact, all the substantial powers of the Oftel derive from this ability to modify the licenses. The DGT can also act on complaints about anti-competitive behavior and refer to the Competition Commission. This power is the result of the Competition Act of 1998.

While fulfilling these duties, the DGT and the Oftel have to consider the following objectives set by the Telecommunications Act:

Primary duties

- Secure the provision of telecommunications services in the UK where reasonable;
- Secure the financial viability of telecommunication operators,

Secondary duties

- Protect the interests of the consumers;
- Maintain and promote effective competition;
- Promote efficiency and economy;
- Promote research and development.

The DGT and the Oftel act under British administrative law. It is therefore "very difficult to challenge any decision where it can be argued that the DGT has exercised judgment in a manner which he considers is best calculated to undertake his duty" (Angel 2001). In fact, the decisions of the DGT can only be appealed through a judicial review process based on the formal respect of the procedure.

In 2001, the Oftel had a staff of 238.6 full time employees and a budget of € 20million. The Oftel is exclusively financed through licensing fees.

4.2 Ministry

The responsible ministry for telecommunication regulation is the Department for Trade and Industry (DTI) headed by the relevant Secretary of State. Apart from being responsible for the telecommunication policies, the elaboration and enactment of acts and bills, the role of the DTI in the regulation process is limited to granting licenses to the operators and the

nomination of the DGT. In theory, the Secretary of State could delegate the power to grant licenses to the Oftel but it never did so. In fact, although this system has been criticized for the delegation of important discretionary powers to the Oftel (Veljanovski 1991), evidence shows that strong links subsist between the regulator and the DTI (see section 6.1.2). Although statutorily speaking the Secretary of State could not overrule a decision from the Oftel, it has, under section 47 of the Telecommunications Act, discretionary powers to give general directives to the DGT about functional priorities in determining the way it can use its powers. As put by Hall et al. (2000) "this big stick power has never been exercised but it is a part of the background of DTI-Oftel relationships, meaning that a DGT who was completely out of step with ministers would be an untenable position".

4.3 Competition Authority

Until 1999, the competition authority was called the Monopolies and Merger Commission (MMC). It was transformed in April 1999 into the Competition Commission. The commission took on the former MMC role of carrying out inquiries in matters referred to it by other British competition authorities concerning monopolies, mergers and the economic regulation of utility companies.

The newly established Appeal Tribunals (in 2000) deal with appeals against decisions of the Director General of Fair Trading (the ministry in charge of implementing competition law) and the utilities regulators in respect of infringements of the prohibitions contained in the Act concerning anti-competitive agreements and abuse of a dominant position. It also conducts inquiries and advises regulators on matters of license modification. It has no formal powers on its own, although recommendations made to the relevant authorities are binding, unless operator appeal to courts or unless the Secretary of State overrules the decision. In case of telecommunications and utility in general, it refers to the regulator to take action. In general competition regulation matters, the Secretary of State for Fair Trading and the Office of Fair Trading are responsible to take actions.

An ongoing case at the time of the publication of this case study is already considered as a landmark in the history of the new Appeal Tribunal and might constitute a serious setback for the Oftel. In March 2002, Freeserve, one of the major internet service providers, made a complaint to the Oftel alleging that BT Openworld was given advanced notice of a 40% price reduction of wholesale broadband access. According to Freeserve, this information allowed BT to prepare a marketing campaign in advance of the rest of the market and was thus in breach of the competition law. After Oftel's rejection of the complaint, Freeserve brought the case to the Competition Commission, while it also submitted a second complaint to the Oftel. Although the decision of the Appeal Tribunal is expect to be made public in March 2003, this case has already had an impact on the Oftel. The Oftel modified the rules and the procedures on complaints. If the Appeal Tribunal supported Freeserve, this would be the first time that the Oftel would have been recognized to have breached its competencies and failed to properly address a complaint.

4.4 Judiciary

The British administrative law does not provide the opportunity for plaintiffs to challenge the content of a regulator’s decision. Actions are limited to judicial reviews, i.e. to control the legality of the decision process. Experts have expressed heavy criticism on this issue: “Although the scope of judicial review has increased in recent years, its impact on the quality of decision making by regulatory agencies is weak and offers no real protection” (Veljanovski 1991). Several explanations can be offered. First, the English courts are not well prepared to deal with highly technical issues. Secondly, the remedies available are discretionary and often not adapted to the situation. Thirdly, the aims of the regulatory design at the time of privatization were to avoid the involvement of courts into the regulatory process and unnecessary lengthen and cumbersome procedures (Prosser 1997). Indeed, the threat to challenge a decision has often acted as an incentive to launch negotiations and discussions between the parties. Although some of its decisions have been challenged before courts or before the Competition Commission, the Oftel has always been confirmed so far. In this sense, the Freeserve case would constitute a precedent.

4.5 Retail price surveillance

There is no retail price regulator in the UK. Abusive pricing is either dealt with by the sector specific regulator or by the OFT and/or by the Competition Commission. However, the British regulatory framework for utilities is well known for its monopoly price-cap pricing regime, summarized in the RPI-X formula. Developed in the context of the privatization of BT in 1984, this pricing instrument has been designed in opposition to the U.S. rate-of-return pricing mechanisms³. The principle is that prices are regulated for a basket of services. Price regulation was intended to be a temporary regulation until full competition emerged. In fact, both, the levels of the price-cap and the content of the basket of services have considerably evolved over time as the table shows.

Table 7: retail price control

Years	Control	Coverage of BT turnover subject to the cap
1984-1989	RPI-3	49%
1989-1991	RPI-4.5	55%
1991-1993	RPI-6.25	67%
1993-1997	RPI-7.5	64%
1997-2001	RPI-4.5	22%

Source (Cave 1997)

In 1984, the basket included local exchange line rental and tariffs for directly dialed local calls and national calls. Progressively, as the market developed, the content of the basket was widened to include operator-assisted calls, private circuits, international direct dialed calls, connection charges etc. In 1997, due to the increasing degree of competition, the content of

³ For a discussion of price-caps and rate-of-return see Beesley, M. E. and S. Littlechild (1992). Regulation of UK privatized monopolies. Privatization, Regulation and Deregulation. M. E. Beesley. London, Routledge: 55-80.

, Lehman, D. and D. Weisman (2000). "The Political Economy of Price Cap Regulation." Review of Industrial Organization **16**: 343-356.

the basket was considerably reduced, to include only residential and small business users. Two phases can clearly be distinguished in terms of price regulation. The first, from 1984 to the mid 90's was a phase in which the regulation of BT was focused on competition creation and the regulation of the residual monopoly. The second phase emerged as soon as competition, mainly through cable companies in fixed lines, became a reality. Then, price regulation loosened to focus more on natural monopolies and universal service obligations. In 2001, despite the fact that the Oftel declared in 1996 that the 1997-2001 price cap lag would be the last, after a review of the pricing regime, Oftel concluded that price caps on BT were still necessary where competition was not effective. It decided to renew the price-cap mechanism until October 2004, with an X factor ranging from 7.5 to 13.5.

4.6 Owner of the incumbent operator

BT Group plc has been completely a private company since 1993. However, until 1997, the government established a temporary safety net to maintain a supervision of BT. This safety net included a "Golden Share" which allowed the government to appoint the Directors (until 1994) and put a 15% maximum on shareholdings per owner. This safety net was lifted in 1997; BT is now part of the BT Group plc.

4.7 Competing operators

Operators in the UK telecommunications industry are all members of the different forums managed by the Oftel. These forums are organized around specific issues, ranging from interconnection to EU implementation groups. These forums act as discussion and consultation platforms.

The intervention of operators in the regulatory game in the UK is quite large. Through industry forums organized by Oftel, operators take an important part in the discussion around telecommunications policies and regulatory policies. But the core of their intervention lies in the negotiations that precede the modification of their licenses. During this process, operators can express their views and can affect the result of the game. Finally, as described above, operators can seek judicial review.

5. Regulatory functions

5.1 Allocation of scarce resources

5.1.1 Frequencies

The Radio Communication Agency manages the civil radio spectrum under the Wireless Telegraphy Act of 1949 and allocates frequencies. In 1998, a new act introduced a market value of the spectrum through auctions rather than an administrative cost-based fee.

5.1.2 Rights-of-way

The Telecommunication Act of 1981 prevented operators from digging up streets to install cables. This flaw was corrected with the Act of 1984. In fact, the strategy pursued by the DTI and by the Oftel, especially during the “duopoly phase”, was focused on encouraging the construction of alternative networks to compete with the BT network. Operators with code powers (see next section) are also authorized to dig up streets.

5.2 Enhancing competition

5.2.1 Licensing

Licensing is the duty of the Secretary of State. It is in fact the core instrument for the regulation of the operators. Most regulatory decisions need at some point a modification of the operator’s license through a complex and often cumbersome process.

There are four types of licenses for public telecommunications operators (PTO): A standard license for the fixed public telephone system, a license for BT (including USO provisions), a license for the fixed public telephone system by cable, and a license for mobile telecommunications operators. All licenses, and especially the BT license, have considerably changed over time due to the numerous modifications. They have become very complex and obscure documents, referring to numerous, secondary legislation, guidelines and EU directives. They also reflect the history of telecommunication regulation in the UK. New provisions were regularly added according to the evolution of the market and regulatory intervention. Number portability and interconnection were generally introduced in the BT license before all the other licenses were modified accordingly later, leading to a fastidious license modification process. With the creation of the Ofcom (see section 6.1.5), the whole regime will probably be reassessed and shift towards an authorization model. This change might have important consequences for the regulatory process. Instead of having an individual license, each operator will be granted an authorization allowing him to provide telecommunications services. These authorizations will refer to standards and requirements set in general codes of conduct adopted by the regulator. Therefore, new provisions will no longer need modifications of the authorizations but will only require the modification or the adoption of codes of conduct.

The third generation of mobile telephony licenses (3G UMTS) was allocated by auction in April 2000 in which 13 entrants took part. Five licenses were won by Hutchinson 3G, Vodafone UK, O2 UK, T-Mobile UK and Orange UK. The auction raised a total of £22.5 billion

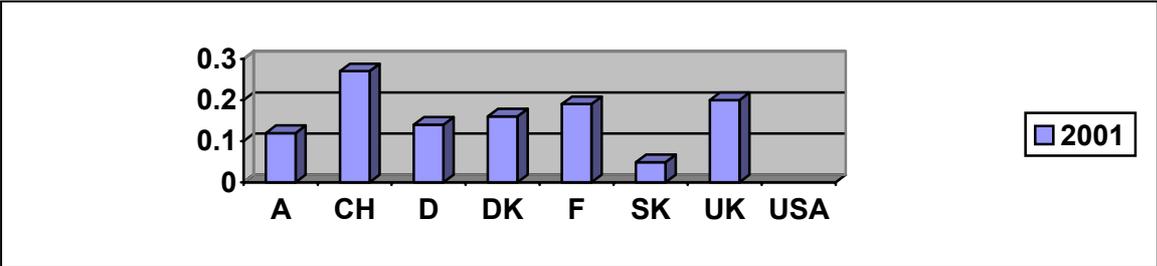
(33.26 billion €) for the government. The first 3G services are due to start in March 2003 in the UK.

5.2.2 Granting access to infrastructures to new companies

- **Interconnection rates and agreements**

Interconnection quickly became one of the critical issues for the success of liberalization in the UK telecommunication sector. Until 1992 it mainly concerned BT and Mercury, the sole network operators. At that time, the interconnection procedure was the responsibility of the operators who had three months to negotiate. If at the end of this period, no agreement could be reached, the DGT would determine the interconnection tariffs. But this process quickly lead to heavy criticism, linked to the strength of BT's bargaining power. This situation urged the OfTel in 1992 to launch investigations and formulate proposals to improve the process. In June 1993, the OfTel published a consultative document on Interconnection and Accounting Separation setting the fundamental criteria essential for interconnection arrangements: transparency, efficiency, non-discrimination and sufficient information. In December 1993, Mercury and BT came to an agreement which was immediately, but unsuccessfully challenged in a legal procedure by Mercury on the interpretation of the BT license. As a result, in 1995, BT had to separate its accounts in order to bring more transparency in the process. The determination of the interconnection rates became, from this moment on, OfTel's sole responsibility. This change was justified by the increasing number of interconnection agreements due to the emergence of new operators. This regulation issue is considered as one the major successes of the OfTel in promoting competition in the telecommunications sector.

Figure 3: Interconnection charges, termination in mobile network for SMP operators



Source: WIK Consult, Stand der Schweizer Telekommunikationsmarktes im internationalen Vergleich, 2002 and World market research Center, Telecoms country report Korea, 2003

A new success for the OfTel was confirmed in January 2003, when the Competition Commission supported the findings and measures proposed by the OfTel to reduce the charges that consumers pay for calls to mobile phones. In 2001, the OfTel conducted a review of the mobile market and found that there was not enough competition in termination charges and that the current charges set by the mobile operators are greatly in excess to their costs. The OfTel proposed to make all four mobile operators reduce their termination costs over the next four years by inflation minus 12%. The mobile operators rejected the proposition to modify their licenses accordingly and the DGT referred the case to the Competition Commission in January 2003. In its report, the Competition Commission concluded that:

- operators are overcharging customers by up to 40 per cent for terminating calls onto their networks;
- callers to mobile phones have no choice but to pay the termination charge set by the mobile operator, which means that there is little incentive for the operators to reduce their charges towards their actual cost;
- there should be a 15 per cent cut in call termination charges for all mobile operators by July 25, 2003; and
- further charge controls for termination rates should be introduced after July - RPI minus 15 % for O2 and Vodafone, and RPI minus 14 % for Orange and T-Mobile. The charge controls should run for three years until 2005-06.

As a consequence, the DGT is currently consulting on the modifications of the mobile operators licenses. This regulatory intervention could make consumers save £190million (280.9 million €) each year until 2006.

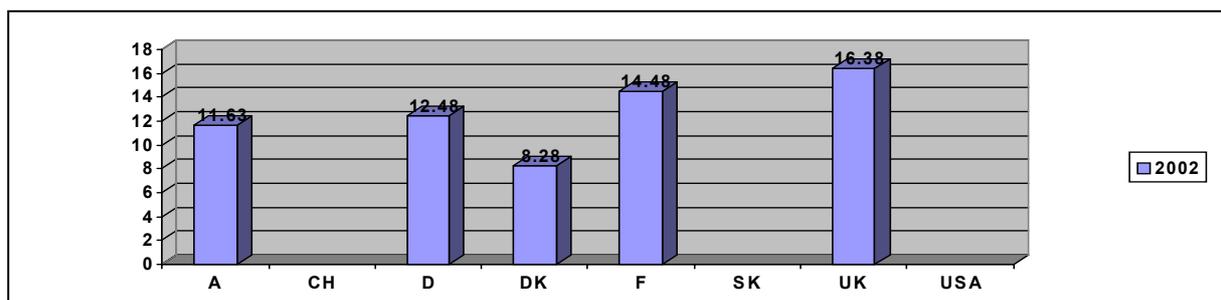
- **Leased lines**

Until 1996, BT's line rental (leased lines and wholesale) was regulated through a price cap called Access Deficit Charges (ADC). This was a highly sensitive issue, since BT would be allowed to recover costs of infrastructure and access by the regulator who made sure that competition was not hindered. But this ADC regime was finally considered "complex to administer, poorly understood and possibly deterring entry" (Wright 1996) and was eventually abolished with the consent of BT. This required modification of BT's license and changes in the general price cap mechanism in the USO provisions.

- **Unbundling**

The Oftel and DTI's strategy to bring competition in the UK telecommunication sector was from the beginning focused on providing the best incentives for competitors to build alternative networks to BT. It was considered that competition would be more effective and regulation less costly if competing infrastructures were available. Therefore, local loop unbundling (LLU) was not considered as a sustainable and effective solution. Analysis from the Oftel concluded that the cost of unbundling would probably exceed the benefits. However, the EU regulation of 2000 on LLU forced the Oftel to comply. The process of unbundling began in 2001. That same year only 61 lines were unbundled. Oftel's work in this area is focused on line rental, the supervision of the contracts and the service level agreements between BT and the competitors.

Figure 4: Prices for the unbundled local loop, full access



Source: Squire Sanders, Legal Study on Part II of the Local Loop Inquiry, February 2002, Brussels Cited in WIK Consult, Stand der Schweizer Telekommunikationsmarktes im internationalen Vergleich, 2002

5.2.3 Facilitating access to customers for new companies

- **Carrier pre-selection and call-by-call selection**

The EU Numbering Directive of 1998 required that carrier pre-selection must be implemented by January 1, 2000. Although competitors to BT, like France Telecom and Deutsche Telekom successfully complied, the Oftel granted BT a referral on technical grounds. Indeed the age of BT's network required important investments and maintenance. The Oftel, and many operators, did not believe at the time that CPS was worth it. The Oftel was indeed very reluctant to introduce such costly measures, preferring to promote infrastructure competition. The intervention of the EU pressed both operators and the regulator to comply.

- **Number portability**

Until 1995, BT was responsible for the numbering scheme. Progressively, the Oftel acquired the data that enabled it to supervise BT on this matter. The introduction of number portability in the fixed net was one of these critical regulatory issues that lead to many conflictual regulatory games between the Oftel and BT. The Oftel proposed that BT should bear the full cost of the introduction of number portability. BT did not object the principle of number portability, but contested the way the cost would be allocated and the legitimacy of the Oftel in setting the price. BT, therefore, refused the modification of its license and Oftel brought the case to the MMC (now Competition Commission). The MMC concluded in December 1995 that the Oftel had the power to determine the costs of number portability, but proposed a change in the cost allocation: BT would bear the initial costs, but would be able, since October 1997 to pass on to other operators 30% of the costs. It was the first time that the MMC introduced a partial modification in a decision of the Oftel. From January 2000 on, all telephone companies had to allow number portability to their customers.

Number portability in mobile telephony was introduced in January 1999. The UK was the first country in the world to give customers this ability.

5.2.4 Guaranty of stable and fair market conditions

The liberalization of the telecommunication sector in the UK can be qualified as a progressive and pragmatic process, in which the regulator's interventions are determinant. In many respects, UK's experience paved the way for the reforms that were to be implemented on the continent ten years later. In this sense, although the goals (promotion and maintenance of competition) were clear, but not detailed, the instruments, the procedures, and the strategies to achieve them had to be invented.

In general terms, it can be said that the UK telecom sector benefits from stable and fair market conditions, although this has not always been the case. The entry for competitors was considerably facilitated in the 1990's and regulatory procedures have always been becoming less asymmetric (although BT is still the object of close scrutiny). Finally, the regulatory

system is slowly shifting towards a more competition based regulation, although one can be skeptical whether that will imply a loosening of regulatory pressure.

5.3 Guaranty of public service

5.3.1 Universal service

The UK framework anticipated the reforms introduced on the continent under the supervision of the EU. Universal Services Obligations (USO) were already set in the Telecommunication Act of 1984 (see section 3.2). However both, the actions of the Oftel over the years and the EU directives contributed to the development of universal service in the UK. The Oftel regularly asked BT to improve its USO services. Standards and targets were often set by BT itself. Over the years, the definition and the scope of USO developed by the Oftel eventually came very close to the EU conception. It includes “affordable access to basic telecommunication services for all those reasonably requiring it regardless of where they live” (Oftel 1995). In this same consultation document the Oftel proposed the creation of a fund to finance USO, to which all operators would contribute. This fund would then help to finance BT’s USOs. Another solution included the setting of a tendering mechanism for the provision of USOs to uneconomic areas and a “play or pay mechanism”, in which an operator could decide to finance the fund or to provide the basic services. Eventually, none of these projects were adopted and BT still bears the cost of USOs, considering that additionally to the brand image, it is more profitable for BT to provide the services than to contribute to a fund.

5.3.2 Consumer protection and quality control

Consumer protection is one of Oftel’s primary goals. Oftel's leading motto has become “the best deal for consumers” (OFTEL 2001). The Oftel has developed consumer guides and provides valuable information for the customers. It is also possible to make a complaint on the Oftel website.

The Oftel provides information on quality and prices in telecommunications on its website. Reports and surveys are regularly published on the quality of services or on prices. However, the Oftel also promotes independent initiatives and certifies websites or endorses associations that comply with a strict code of practice and provide independent, accurate and up-to-date price information. For instance, the Comparable Performance Indicator website (www.cpi.org.uk), provides reports on the performance of operators, evaluated under criteria and indicators elaborated by the industry and the Oftel. Another website (www.uswitch.com) offer the customers an evaluation of the gains in switching from supplier.

In January 2003, a new institution, the Telecommunication Ombudsman (www.otelo.org.uk) has been created by an association of operators willing to reduce the costly and lengthy procedures resulting from conflicts with customers. This ombudsman is responsible to address disputes between customers and the industry and is totally independent from the Oftel.

6. Evaluation of the regulatory system

6.1 Assessment of the NRA

6.1.1 Resources and expertise

In comparison with its institutional equivalent in the other utilities sectors, the Ofel is a medium-sized regulator. With a staff of around 230 people and a budget of € 20 million (£13.6 million), it occupies a median position. However, Ofel suffers from some structural problems. One of them is that in 1999 it had a staff turnover of 35% (10% higher than the average of utilities regulators) which diminishes its productivity and its expertise inside the organization (Atkins 2001). This problem is aggravated by the fact that regulators consume important amounts of money in consultants, thus acknowledging to some extent the insufficient level of inside expertise and of staff. However, this can also be interpreted as the willingness of the Ofel to show that it is open to outside views and expertise, thus increasing its credibility as a not single-minded regulatory authority. Finally, the important proportion of Ofel's staff of civil-servants, originating from the DTI allows a lesser flexibility in recruitment and staffing.

In August 2000, the Treasury Ministry commissioned the consultancy firm WS Atkins to carry out an efficiency review of the utility regulators, namely, Ofgem (Electricity and Gas), Ofel, Ofwat (Water and sewerage) and ORR (rail). This study concluded that (Atkins 2001):

- Regulators are professionally run organizations;
- The cost of regulation is rising but remains considerably low in comparison of the turnover of regulated industries;
- Regulated industries are in general satisfied with their regulators, but require more focus, more commitment to medium-term objectives, more flexibility in consultation processes and more transparency in the regulatory process;
- Internally, regulators should develop their management tools and financial controls.

6.1.2 Independence vis-à-vis political interests and transparency

In the UK, a significant scope of regulatory independence has been conferred to the Ofel. In the early years, the debate on regulatory independence was rather focused on the question whether the independence of the regulator was not too important and contrary to the democratic institutions. Indeed, the statutory mandate and institutional independence of British utility regulatory authorities, and in particular the Ofel, has led to many debates. The UK regulation style was, and to some still is, "informal, discretionary, co-operative and closed" (Veljanovski 1991), leaving excessive discretionary powers to the regulators acting "in the shadow of law" (1991) : "The new watchdogs are constitutional anomalies which do not fit well into the framework of controls, checks and balances." (1991). This criticism on the regulators is strong, but largely unfair and moderately relevant. In reality, the picture is much more subtle.

First, as noted before, although limited, political control of the Ofel is theoretically possible. The Secretary of State for Trade and Industry can give binding instructions to the Ofel on how to exercise its powers. The fact that it never actually did, does not mean that the Ofel can act without restrictions and overpass or bypass its statutory powers. It can be explained by the fact that in doing so the DTI might have undermined both, its own credibility and commitment and that of Ofel's. In a sense, the existence of dispositions acts as a credible threat designed to discipline the regulator.

Secondly, there was the fear that the personalization of the DGT as “the regulator” would turn the regulatory process into an autocratic and authoritarian system. This fear did not materialize. First, because substantial powers like licensing and international relations are still in the hands of the Secretary of State. Second, because the DGT and the DTI consult each other on major policy issues and legal framework modifications. And finally, although all the final decisions are made by the DGT alone, the decision process involves multi-levels and actors inside the Oftel which largely shapes and affects the final decision. This does not, however, diminish the important impact of the personality of the DGT on the regulation process (see section 6.1.3).

Thirdly, the Oftel is embedded in a nexus of interdependent relations with the other actors of the regulatory system and as such depends on them for information and/or support. In other words, the Oftel does not act alone and is not unchallenged. Its credibility and effectiveness largely depend on the way it is able to justify and explain its decisions.

In fact, this whole discussion revolves around the issue of the accountability of the Oftel as an independent authority. Over the years, the transparency of Oftel's decision process and the sophistication of its consultation process have been considerably increased. The Oftel publishes annual reports to the public and the DTI, answers to parliamentary select committees and is financially audited and subject to judicial review. Since 1995, the Oftel also publishes a management plan for the next two forthcoming years and sets a number of targets that are (qualitatively and quantitatively) evaluated every year and presented in its annual report.

However, many concerns have been raised, in the early years and more recently, whether the Oftel was and is too soft on BT. It is very difficult to give a definite response to this question. Nevertheless, it is quite evident that through time, the Oftel gained confidence and was progressively able to emancipate from the original regulatory framework which was designed to introduce a very gradual competition. The entry of new actors, such as competitors or the EU, made it easier for the Oftel to challenge and to confront BT (Hall, Scott et al. 2000).

“Overall, [the] Oftel can be seen as a regulatory agency constrained within a bounded space, but one that was resourceful in using shifting alliances to secure as much as it could from the opportunities within the structure and its lacunae and employing considerable imagination, resourcefulness and energy to re-shape the regulatory environment” (Hall, Scott et al. 2000).

6.1.3 Efficacy and Credibility

It is difficult to assess the effectiveness of the British regulatory framework, and more precisely the impact of the Oftel, given the fact that the original regulatory goals and objectives were very general. Over the years, the Oftel has largely set the objectives itself as problems emerged. In other words, the British regulatory framework is characterized by constant innovations relying on a permanent interpretation and re-interpretation of the original goals.

As a remainder, here are the goals that were set in the Telecommunications Act of 1984:

Primary duties

- Secure the provision of telecommunications services in the UK where reasonable.
- Secure the financial viability of telecommunication operators.

Secondary duties

- Protect the interests of the consumers.
- Maintain and promote effective competition.
- Promote efficiency and economy.
- Promote research and development.

As far as primary duties are concerned, the development of telecommunications in the UK is a success. UK stands among the countries where the infrastructures and the services are the most developed and advanced (except internet broadband). However, concerns have been raised by the industry whether the second primary duty of securing the financial viability of operators has not been overshadowed by secondary duties such as the promotion of competition and the protection of consumers. Those secondary duties have indeed been the main reference and objectives at least since the early nineties and have become de facto the ultimate primary duties of the OfTel. The 3G story is probably the best example of regulatory opportunism of a government that might have sacrificed efficiency, economy, the promotion of competition and the security of operators' viability on financial imperatives. Nevertheless, although general and vague, the basic objectives of the Act of 1984 are met, even if the way to reach them was long, cumbersome and sometimes uncertain.

What is the role of the OfTel in these achievements?

In discussing this issue, there might be a risk of overweighing the impact of the OfTel on the regulatory outcomes. Indeed, the British case is characterized by two specificities, the personalization of the regulator and the substantive nature of its regulatory process, which tends to make it more difficult to assess the impact of the OfTel on the regulatory outcomes.

Both literature and interviews emphasize the importance of the personalities of the regulators and the impact of their style on the regulatory process and outcomes. Sir Bryan Carsberg, the first DGT (1984-1993), was said to see himself rather as a referee than as a real promoter of competition. His credibility as an academic (Professor at the London School of Economics) put him in the position of giving credibility and substance to the new regulatory authority. Don Cruikshank (1993-1998), was as a tougher regulator willing to bring competition and to confront BT. His entrepreneurial background helped him implementing a voluntary and more proactive regulation style. Many of his crucial decisions brought greater competition in the sector (interconnection, CPS etc). Finally, the current DGT since 1998, David Edmonds, can be characterized as a 'broadband strategy' man, in line at least on this issue with the government to develop 'Broadband Britain'. The first DGT was an academician, the second was more an entrepreneur, and the current DGT is seen by many as a more 'political animal'. All these observations stress the importance of the DGT in the regulation of the sector. The

evolution of the regulatory strategies and instruments can be largely considered as the outcome of the DGT's regulatory style.

However, if the regulator undoubtedly influences the regulatory process, his contribution is bounded and determined by the context and the regulatory environment. First, as mentioned above, the DGT is not free to do as he wishes. Formal and informal rules are there to contain his powers. Second, the history of telecommunications regulation in the UK is a story of market dynamic (progressive increase in the number of entrants), of technological progress (cable, mobile, etc.) and of trial and error. In other words, elements from the environment might be a better explanatory factor for the development of regulation than the sole will and style of the DGT to follow a specific path. As a consequence, given the nature of regulatory style, which at least until 1995 was largely reactive rather than proactive, market dynamics and technology appear to be the main drivers of the regulatory agenda in the UK. The real importance of the DGT is therefore not so much in the steering of the regulatory process toward particular and clear objectives, as more in the way the DGT answers to the challenges that are constantly raised by the environment by bringing in new ideas and his own conception of the role as the regulator.

Secondly, the UK utility regulatory framework is an excellent illustration of a 'substantive' regulation as opposed to a 'proceduralist' regulation system. As Parker defines (1999) substantive regulation is associated with "a desire for policy consistency, expertise in solving problems, protection of diffuse interests and clear definitions of objectives and power limits, which may be missing where regulation is under direct political control. [...] The principal aim is to produce 'efficient' regulation, promote regulatory expertise and sustain a high degree of regulatory independence". On the other hand, the proceduralist approach focuses on accountability, formal rules, appointment of regulators by elected official and judicial review to reinforce the democratic control. If the latter model focuses on the process and on the rules, the former emphasizes on pragmatism, learning and expertise. As a consequence, it is much more difficult to evaluate the effectiveness of a substantive regulatory framework, and even more the impact of the dominant regulatory authority, given that it relies on processes and objectives that evolved in time. In other words, the UK regulatory framework, and the impact of the regulatory authority, must be evaluated accordingly.

Nevertheless, one can reasonably say that the British telecommunications regulatory framework, and more specifically the regulatory, authority have fulfilled their assignment as it was intended by the legislator in 1984 (see section 7).

Moreover, the OfTel has progressively established its credibility both in the national and international arenas, built its legitimacy, and somehow paved the way for the ulterior reforms on the continent.

6.1.4 Public interest

The conception of the "public interest" in the UK differs in the form, but not much in the content, from continental traditions of "public services". Indeed, if the continental traditions refer to the citizen to justify public intervention, in the UK, the emphasis is put on the interest

of the consumer. The starting point is different, but in the end, what we can empirically observe on both sides of the Channel is quite similar. The content of universal services obligations, at least in the telecommunications sector, is very similar to other EU countries and the quality and level of services do not strongly differ.

6.1.5 Convergence

The discussion about convergence of communication media and infrastructures has been formally initiated in the UK regulatory framework with the enactment of the Office of Communication Act in 2002, setting the conditions for the creation of a new regulatory institution called the Office of Communication (Ofcom www.ofcom.gov.uk). The second step was made in November 2002 with the introduction of the Communication Bill to the parliament that will set the new regulatory framework.

The Ofcom will take over the responsibilities in the communication sector that were previously distributed among five different bodies: The Broadcasting Standards Commission, the Oftel, the independent Television Commission (licensing and regulating independent television services), the Radio Authority (licensing and regulating the independent radio services) and the Radio Communications Agency within the Department of Trade and Industry.

The general duties of the Ofcom will be to further represent consumer interests in relevant markets, where appropriate by promoting competition, to secure the optimal use of the radio spectrum, to secure that a wide range of TV and radio services are available in the UK, and to secure that standards are applied in the communication sector.

As mention above, the licensing mechanism will be replaced by an authorization model. The Bill is still before the parliament, but should be enacted before the summer 2003.

6.2 Flexibility of the whole regulatory system

The history of the liberalized UK regulatory framework is already long. It started in 1984 with the privatization of BT and the implementation of the duopoly policy with Mercury. Over the years, many adaptations, corrections, instrument and institution fine-tuning processes have occurred on a trial and error basis. Progressively, as soon as the EU reforms caught up, the EU Directives started to have a considerable effect on the UK framework. A great continuity is found in the history of UK telecommunications regulation, changes in strategies, institutions and instruments occurred on the basis of lessons learned and pragmatic answers to new challenges. The UK regulation system has demonstrated a formidable ability to learn and to change. This is probably where its greatest strength lies. The role of the regulator in this respect has been critical.

Hall, Scott and Hood (2000) conducted an independent inside evaluation of the Oftel. This study was commissioned by the DGT in the time of Don Cruikshank. Their analysis, although limited to the Oftel, is full of lessons for the evaluation and analysis of independent regulation. It also contributed to assess the role of the Oftel in the regulatory process on

telecommunications in the UK. One characteristic of the early regulatory framework of 1984 was its light-handed and temporary nature (Littlechild 1983). A too heavy regulatory pressure, at that time, would have undermined the efforts of the government to sell BT at a high price per share. In a sense, the duopoly period was nothing more than the reflection of the conservative government not to introduce too much competition in the sector. However both, the behavior of the Oftel and the evolution of the sector quickly outdated the Act of 1984 and its philosophy. This situation gave an extraordinary opportunity for the Oftel to assert its powers in dealing on a day-to-day basis with the practical issues it was confronted with. "Following a commonly-observed pattern of entrepreneurial bureaucratic behavior, [the] Oftel consistently (though sometimes belatedly) responded to changes in its environment by seeking to shape those changes in ways that increased or enhanced its responsibilities or influence" (Hall, Scott et al. 2000). The same authors add that the Oftel pursued this goal, while performing its statutory duties, by adopting three complementary and combinable strategies: The 'Cartesian-bureaucratic', the 'bargaining-diplomatic' and the 'adhocratic-chaotic' decision making strategy (2000).

The first decision-making style, called 'Cartesian-bureaucratic', is typical for the bureaucratic environment. The regulatory problem is characterized as technical in nature and requires information, expertise and data processing to produce a satisfactory output at the end of a standardized procedure. This was typically the case of BT's periodical price review for the resetting of the X factor of the price cap (Hall, Scott et al. 2000) (see section 4.5).

But the regulatory process and objectives are not always that clear-cut. Data is often missing, the problem is not fully identified and the objectives are not always well known. In this situation, another decision making process emerges: The 'bargaining-diplomatic' process where negotiation, workshops and strategic positioning are the key features. There are numerous illustrations for this strategy. The interconnection affair between 1992 and 1995 (see section 5.2.2) was a good example of the Oftel announcing its objectives and proposals and discussing them with the industry and the stakeholders before coming to a final decision.

The so-called 'Fair Trading Condition' affair is a good illustration of an 'adhocratic-chaotic' process, where the problem and the remedies are not clearly identified and where the outcome is unpredictable, as well as the decision process itself. In 1996, the Oftel proposed to introduce a "Fair Trading Condition" in BT's license prohibiting anti-competitive behavior under the model of art. 85 and 86 of the Rome Treaty. This measure was designed to address two problems. First, the growing complexity of BT's license, which has been constantly revised and amended over the years. And second, the inadequacy of the British competition law (too slow in detecting unfair trading practices and lack of effective remedies). By introducing this 'Fair Trading Condition', the Oftel choose not to wait for a modification of the law, which the conservative government was not eager to enact, and proposed to introduce directly such a provision in BT's license before extending it to all the other operators. BT refused and preferred to follow the legislative route that would have guaranteed more rights of appeal against the content of the decision (Strickland 1997). This was followed by an exchange of legal arguments peaking when the Oftel boldly declared that if BT refused the modification of its license, it would be tougher on the next price review, that the price review and the 'Fair Trading Condition' were one package and that it was ready to

refer the matter to the Competition Commission. Then followed by a round of negotiations between the Oftel and BT, an agreement was finally reached in which the appeal process would be widened and the role of the DGT limited. The Oftel proposed not to refer to the Competition Commission, if BT accepted the modification and asked for a judicial review. The judicial review, to the surprise of BT, confirmed the position of the Oftel and the 'Fair Trading Condition' was introduced in BT's license and later in all the other operators' licenses. In other words, by strategically alternating a strong and firm position with credible threats and negotiation, the Oftel both substantially adapted the regulatory framework and showed it was able to adopt an entrepreneurial approach. The Competition Act of 1998 confirmed Oftel's action and introduced the elements of the 'Fair Trading Condition' in the law.

These three illustrations show that the Oftel in different situation adopted different strategies, and demonstrate the ability of the British regulatory system to learn and to adapt new issues and problems. However, much criticism is still raised against the Oftel. Many (mainly new entrants) criticize its reactive instead of pro-active attitude. It is said that the Oftel prefers to wait for a problem to arise than to anticipate it. This critic is not unfounded. The history of the regulation of the British telecommunication sector is characterized by stories of reactions and corrective measures to new problems (interconnection, numbering, etc.). This is probably due to the fact that the legislative framework did not provide clear and measurable objectives for the regulator, except in very broad terms ('promote competition', 'protect the interests of the consumers'). As a result, the regulator had to cope with constantly changing environments that obliged him to permanently deal with existing problems, while new ones emerged. This observation does not, however, diminish the formidable degree of adaptability of the UK framework. Nevertheless, one must add that the greater importance and relevance of the EU regulatory framework contributed to give more consistency and substance to the regulation of the British telecommunication sector. For instance, the EU conceptual and legal framework to evaluate and assess market power contributed to give more robustness and stability to the analysis performed by the Oftel.

7. Outcome performance indicators

7.1 Competition

- **Number of operators on the market**

There are over 150 licensed fixed lines telecommunications operators in the UK (national and international), 4 main mobile operators, 2 cable operators and half a dozen major internet providers.

Licensing is a crucial element of regulation in the UK, since most decisions of the regulator require a modification of the operators' licences. Under the new Ofcom framework, licences will be replaced by authorizations. The fact that licensing, compared to other countries (e.g. Denmark), is an obligatory phase to become an operator, and that there are many different types of licenses does not seem to have negatively affected the attractiveness and dynamism of the UK telecommunications market. Since the early nineties, Oftel's policy has been to create the best incentives and conditions for the development of competition and to regulate only when and where necessary as a second-best solution to competition. Indeed, most of

Of tel’s regulatory interventions since the second half of the nineties have contributed to facilitating market entry (CPS, interconnection). Of tel’s impact on the number of operators is therefore indirect. Licensing is the responsibility of the DTI.

- **Choice for the consumers in terms of operators/technology**

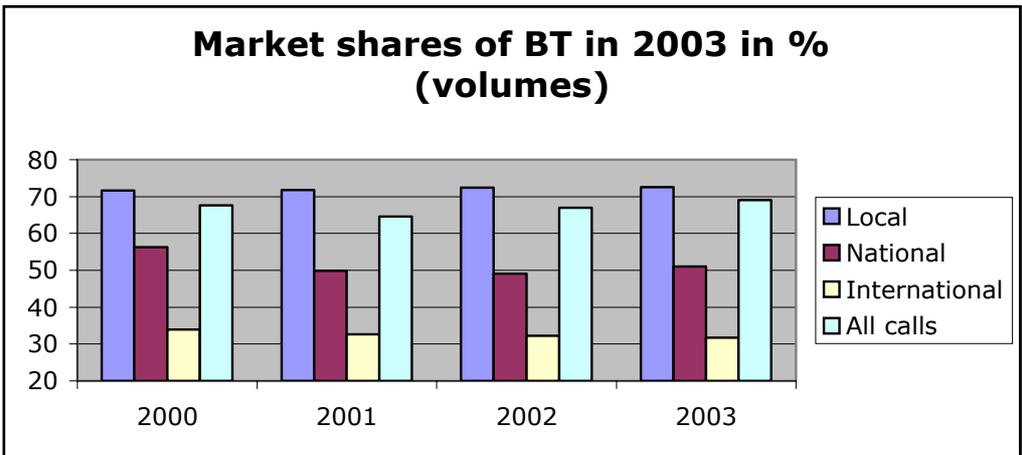
In fixed telephony, half of the UK households (12m) have now a choice of fixed-line provider, compared to no choice in the early nineties, mainly through cable. In Urban areas, choice is higher. As for international calls, over 50 providers offer tariff agreements.

- **Market shares of the incumbent**

The global market shares of BT (all calls, except mobiles) peak at around 69%, although the situation in specific markets is more uneven. Comparatively speaking, the market shares of the incumbent in the UK is significantly lower than in most European countries except in very specific segments (internet). International calls were the first liberalized services and the market share of BT has considerably decreased, because of the fierce competition in this segment. The competition of cable and CPS carriers has considerably put BT under pressure in domestic markets (national, local), and the rather recent introduction of the local loop unbundling has not (yet) made much difference (except in internet).

Competition in fixed telephony appears to become more and more stable and shares of BT tend to rise again. As in other countries (Denmark), the fierce competition phase in which the shares of the incumbent could only fall seem to be over, at least in the fixed telephony segment. The previous efforts of the regulator (unbundling, CPS, interconnection) seem to have produce their outcomes, but appear to be unable to further reduce market power of the incumbent. As an illustration of this, the efforts of the regulator are today more oriented toward market segment where competition can be further developed, like internet.

Figure 5: Market shares of BT in 2003 in % (Volumes)



Source : Of tel market reports

Although no real concentration process is observable, the first signs of the maturity of certain market segments (fixed telephony) can be identified. It appears that the Of tel, and probably

Ofcom, has already acknowledged this reality, in seeing its role in the future as more of a competition regulator than as a specific sector-specific regulatory authority.

- **End-user prices**

If liberalization is a success story in the UK in terms of competition, the situation in terms of prices is uneven. The UK is not among the countries where telecommunications are the cheapest. International comparisons tend to place the UK in the middle upper countries in terms of prices, even if in specific market segments (internet) the UK perform better. At least tow factors can explain this situation. First, in many segments the market gives the first signs of maturity (fixed and mobile) and competition is more and more focused on the services than on the prices. Second, the regulatory framework, and Oftel's attitude toward regulation has evolved through time. From the introduction of competition by ways of a heavy asymmetric regulation of BT putting pressures in prices, regulatory intervention has shifted toward securing healthy competition and protecting the consumers. In many decisions, Oftel's considers the impacts of a too heavy pressure on prices on innovation and sustainability of the operators. In other words, from a philosophy of systematic prices reduction, Oftel's actions has progressively shifted toward the protection of consumers and the stimulation of innovation even if that meant higher prices than in countries where competition was more recently introduced.

7.2 Public services

Except maybe in broadband, availability of services is rather good in the UK. Public services obligations and the quality of services are considered satisfactory and the information for consumers is large and diverse.

- **Availability of services**

Table 8: Availability of services

ADSL : 63%	Leased lines 2Mbps: data N/a
ISDN : 100%	Voice telephony over cable : available
Cable modem: available	Voice telephony over powerline : data n/a
FWA availability : 12% of population	

Sources : Oftel reports 2002-03,

With 1.5 million users in 2002, broadband internet in the UK is lagging behind most European countries, although it is growing quickly. Competition in broadband is possible by using DSL or cable. Efforts by Oftel to boost broadband access and competition have been extensive since 2001. Local loop unbundling of BT's lines has contributed to make market entry easier, but it has required heavy regulatory intervention to cut BT's prices. It is expected that by 2005, the DSL technology will be available to 80% of the population.

Telecommunications over cable networks is a great success in the UK and represents the main source of competition for both voice and internet in the fixed telephony market. A lot of innovative products, like interactive television are widely available throughout the country.

Fixed Wireless Access, although nascent, are expected to rise in the coming years. The start of 3G services in March 2003 is expected to boost the development of further services and competition.

- **Quality of services**

Similarly, the continuous practice of industry discussions and customer associations' consultation has led to the progressive development of quality and performance standards negotiated between the industry and the regulator. On top of this, complaints by users can be very easily filed on Oftel website.

- **Information to the public**

Under its motto 'the best deal for customers', the Oftel has contributed to increase the quality and information for consumers and their protection. The different actions of Oftel (reports and surveys, certification of information websites, elaboration of performance indicator with industry, Telecommunication Ombudsman, see section 5.3.2) have considerable impact on the degree of information of the public. It must be added that the tradition of consumer protection and defense initiated by consumers associations and interests groups have a large audience in the public. Information and surveys on telecommunications services find a large coverage in both written and television media.

8. Conclusion

Coming to the assessment of the performance of the UK regulatory framework, one can formulate the following conclusions:

- The UK telecommunications market is very competitive. The number of operators in the different market sections is high. The best illustration is probably the mobile market where all four competitors control each more or less a quarter of the market and the comparatively low market shares of the incumbent in fixed telephony.
- However some markets tend to under-perform. The broadband internet market is comparatively speaking less developed and competitive in the UK than in most other OECD countries.
- The choice for consumers is large, and innovation is rather high. The UK ranks among the first countries where the third generation mobile telephony is due to start.
- Although still important, the market shares of the incumbent operator (BT) are comparatively speaking lower than in many European countries, although they may remain high in specific market sections (broadband).
- Comparatively speaking, prices in the UK tend to be generally still quite high.

In a few words, if the objectives of liberalization and regulation are to promote competition and to decrease prices, the UK experience illustrates a success in competition, but a mixed

achievement in matters of prices compared to countries where liberalization is a more recent phenomenon (Germany, Denmark, France, etc.).

The role of the UK regulator in these results is important. The Oftel has been able to guarantee easy market entry for operators in terms of procedure and information, although the Oftel is not the licensing authority.

The interventions of the Oftel have also largely contributed to the development of competition in the UK markets. The regulator has initiated most regulatory innovations like CPS and interconnection. However, some measures were implemented by the Oftel because of the pressure of EU dispositions (e.g. unbundling). The information given directly or indirectly to the consumers by the Oftel and the implementation of a strategy of increasing customer awareness and knowledge has also been an achievement of the Oftel. Finally, Oftel's surveillance and scrutiny of market development (price reviews, market reviews etc.) have led to several regulatory interventions which promoted competition. In short, the ability of the Oftel to modify the licenses of operators has constituted an important regulatory power to increase competition. As a consequence, the choice available for UK customers both, in terms of operators and services, is large.

The UK telecommunications case is special for at least three reasons:

- It was the first country to liberalize telecommunications in Europe.
- It is among the few countries in Europe that totally privatized the sector.
- It was usually considered as the one model of the sector specific independent regulatory system.

For all these reasons the conclusions drawn from this case study are of particular relevance for the purpose of assessing the performance of specific regulatory frameworks. We would like to conclude by pointing out some preliminary lessons that can be learned from the UK telecommunications case.

First, the *independence* of the regulatory authority does matter in the regulatory process. Indeed, the legitimacy and the credibility of the Oftel is the outcome of its independence and its commitment to its original objectives, although these have evolved through time. This independence has contributed to the credibility and the legitimacy of the Oftel in different ways. First, it allowed it to follow different and alternative strategies to achieve its objectives, away from political pressures and bargaining. Second, it has allowed the Oftel to engage in negotiations with the operators which would have been much more difficult to initiate if Oftel was a ministerial body. Third, it gave greater flexibility to the regulatory framework in adjusting and fine tuning the instruments and the process of regulation. Fourth, the fact that the Oftel has until now been very rarely successfully challenged can be considered as an indication of the quality of its intervention.

A second lesson to be learned is that the *ability of a framework to adapt* to the environment and the issues is crucial. Although no formal dispositions were laid down in the legal framework to conduct the evaluation of performance and achievements, many evaluations

and studies were commissioned to improve or correct the existing framework. Again, the credibility of the Ofcom essentially relies on the quality of its outputs. Therefore, a constant quest for the improvements and fine tuning of instruments and strategies is in the interest of the regulatory authority. However, the subtle institutional arrangement of checks and balance, and more specifically the role of the judicial review and of the Competition Commission has indeed contributed to the adaptability of the UK telecommunications framework.

Thirdly, the history of the regulation of the UK telecommunications sector has demonstrated the importance of a *pro-active intervention* of the regulatory authority, at least in the early stages of the liberalization process. The most spectacular achievements in terms of competition have been attained when the regulatory framework and more specifically the Ofcom developed a more pro-active style of regulation (interconnection etc.).

Fourthly, although the reform in the UK was initiated long before the EU launched its liberalization program, the *impact of EU intervention* must be acknowledged.

Finally, actors of the UK regulatory framework generally formulate two claims about the future of regulation. First, that the telecommunications sector is progressively shifting from a sector specific mode of regulation towards a more general competition based one. And second, that accordingly the regulatory pressure is also progressively reduced. Addressing these two claims would require a more detailed analysis. However, it is possible to derive from this case study two hypothesis:

1) It is indubitably true that regulation by ways of competition law has increased in the regulation of the UK telecommunication sector. It is, however, still unproven that this has resulted in a corresponding reduction of sector specific regulatory intervention, as both interviews and analysts reveal (Young 2001).

2) If regulatory pressure is diminishing, which has still to be demonstrated given the difficulty of the task and the previous remark, it is a very recent phenomenon.

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