

Directory Enquiries - From 192 to 118

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EXECUTIVE SUMMARY



1 In 2003 the Office of Telecommunications (Of tel), which has since been subsumed into the Office of Communications (Of com), opened the directory enquiries telephone service to competition. The numbers 192 and 153¹ have been replaced by a choice of over 200 different 118 numbers. Of tel’s objectives were to:

- improve the quality of service;
- encourage greater price competition; and
- bring increased innovation and choice.

2 Before 2003 telecommunications network operators provided directory enquiries services as part of their Universal Service Obligation² and callers were directed to the service provided by their network operator. By 2000 a number of firms had expressed their interest to Of tel in entering the £300 million per annum directory enquiries market. There was, however, little scope for new firms to compete whilst the network operators held the advantage of familiar short telephone codes (192 and 153). Of tel decided to encourage competition in the provision of directory enquiries services by introducing a consistent numbering basis using the 118 prefix. This was consistent with Of tel’s statutory obligations under the 1984 Telecommunications Act and its belief that competitive markets benefited consumers.

3 At the end of December 2003 Of com took over the duties and responsibilities of Of tel and four other communication bodies.³ Of com’s aim is to further the interests of citizen-consumers through a regulatory regime which, where appropriate, encourages competition.

4 This report examines Of tel’s management of the liberalisation and whether the introduction of competition has benefited consumers. The report makes a number of recommendations intended to inform Of com’s development of its regulatory approach. Appendix 1 explains our approach and methodology, which included commissioning economic advisers, Oxera, to undertake an economic analysis of the introduction of competition to the directory enquiries market. A summary of its paper is at Appendix 2.

Our findings

The results of liberalisation

Objective i: Improved quality of service

5 In November 2004 Of com’s research⁴ showed that, under the new arrangements, 86 per cent of directory enquiries requests received the correct telephone number. Of the 30 services surveyed, 19 provided the correct information for at least 90 per cent of requests. Success rates in finding residential numbers were lower than business numbers (Figure 1). Of com could not compare the performance of the 118 companies against the previous 192 services as its predecessor, Of tel, had not collected data on the accuracy of the networks operators’ services. This is because, in common with other countries’ experiences of liberalising their directory enquiries markets, Of tel had identified that there were few public concerns about the accuracy of directory services. However, Of tel’s post-liberalisation survey of the performance of new services in October 2003 produced unreliable results as the numbers tested were not wholly representative of directory enquiries call profiles and sample sizes were too small to provide statistically robust results on a service by service basis.

1 Success rates in obtaining the correct telephone number, November 2004

	Residential %	Business %	Combined ¹ %
Average	81	86	86
Best	99	98	98
Worst	71	82	83

Source: Of com and ICSTIS mystery shopping, November 2004

NOTE

1 Of com and ICSTIS weighted the combined results to reflect the average call profile to directory enquiry services, specifically that 87 per cent of requests are for business numbers.

1 192 was the number used for requests for national telephone numbers; 153 was used for international requests.
 2 A provision in some Telecommunications Act licences requiring the licensee to provide certain services to all specified persons. For example, BT was required to provide basic voice telephony and certain other established telecommunications services to anyone who may reasonably request them.
 3 The following organisations were merged to create Of com: The Office of Telecommunications; The Broadcasting Standards Commission; The Independent Television Commission; The Radiocommunications Agency; and The Radio Authority.
 4 This research was conducted in association with ICSTIS, the Independent Committee for the Supervision of Standards of Telephone Information Services.

Objective ii: Increased price competition

6 The new directory enquiries numbers have a variety of charging structures and the price depends on: the chosen service provider; the network on which the call is placed; and the length of the call, which can be affected by the type of service required. A National Audit Office analysis of prices shows that there is significant variation in prices (Figure 2) and the majority of callers now pay more than they did for 192 requests, although a wider range of services is now available (paragraph 9). Before the liberalisation, BT charged 40 pence for two requests on 192 but, in August 2004, the two numbers with 80 per cent of market share – BT (118 500) and the Number (118 118) - charged 51 pence and 56 pence for requests from a BT phone line.⁵ A wide range of prices was available and around one quarter of services were cheaper than BT’s 192 service. However, in common with some other telecommunications products, customers on most non-BT networks have a restricted choice of 118 numbers.

7 All service providers are required to include price information in their advertisements for 118 numbers⁶ and network operators are required to publish pricing information for all call services, which they often discharge via publication on their websites. Ofcom does not offer price comparisons on its website although it does give a link to an independent price comparison website. But it is not easy for consumers to find the best price, which limits the effectiveness of price competition.

8 Business and public sector bodies have more scope to benefit from price competition by seeking out the best deal. Large users of directory enquiries are able to negotiate contracts with 118 service providers on terms more favourable than the standard public tariff. However, the extent to which business and government bodies have taken advantage of competition in directory enquiries is unclear. The Office of Government Commerce has negotiated telecommunications contracts on behalf of all government departments, but take-up is not compulsory and is inconsistent across the public sector. In 2004 a business survey⁷ also showed that just 17 per cent of businesses considered they had benefited from the competitive directory enquiries market, mainly through reduced costs. 95 per cent of survey respondents indicated difficulties in comparing the cost of competing services.

2 The cost of calling 118 services, as at August 2004

	Cheapest ¹ £	Most expensive ¹ £	Range %
45 second call²			
Landline	0.27	1.73	540
Mobile	0.25	2.50	900
Five minute call²			
Landline	0.55	4.00	625
Mobile	1.25	12.50	900

Source: National Audit Office analysis

NOTES

1 Represents the cost of a call to a national directory enquiry service.
 2 45 seconds is the average length of a call to a national directory enquiry service. A five minute call has been used to give an indication of the cost of an enquiry which was subsequently connected to the end number.
 3 BT charged 40 pence for requests for two numbers on 192.

Objective iii: The introduction of innovative services

9 Callers now have a much wider choice of directory enquiries services, including the option to connect directly to the requested number; to receive numbers by text; to locate services within a chosen area; cinema listings; and the provision of train times. There are also niche players in the market providing specialist services; for example, the provision of telephone numbers of services recommended by members of the gay community. Ofcom’s research showed a low level of awareness and use of most of the new services and one half of callers using directory enquiries just to find a telephone number.

The liberalisation process

The decision to liberalise

10 In deciding to introduce competition, Ofcom collected evidence from a public consultation, consumer research, a review of other European countries and a cost-benefit analysis of different options. But its analysis did not clearly indicate an optimal approach. In particular:

5 For an enquiry requesting one number and lasting 45 seconds.
 6 The pricing requirements are set out in the ICSTIS Code of Practice governing the provision of directory enquiry services.
 7 Communications Management Association survey 2004.

- the public consultation showed that telecommunications consumer groups and existing providers wanted to retain the existing 192 services, while potential new entrants wanted change;
- consumer research was ambivalent and did not indicate either a strong demand for or objection to change;
- Oftel's review of other European countries indicated evidence of benefits but did not evaluate fully the differences in each market; and
- the cost-benefit analysis showed the case for liberalisation was highly dependent on assumptions about demand for new services which, although subject to some sensitivity analysis, were not tested rigorously.

11 In addition, there was no evidence that existing 192 services were of poor quality and limited evidence that they were over-priced, although Oftel had concerns about the lack of innovation. Because it had not identified a compelling case to retain the existing arrangements, it decided to proceed with the market liberalisation. Before introducing competition, Oftel did not conduct a full economic analysis of how a market with the unique characteristics of directory enquiries would function; or the extent to which a competitive market structure would benefit consumers. For example, a fuller analysis of the impact on consumer behaviour of factors such as advertising and price sensitivity would have provided a better understanding of the likely effect of competition.

Oftel's management of the liberalisation

12 Oftel managed the liberalisation project well. The project team communicated clearly with stakeholders, provided relevant information to interested parties and ensured that the project kept to an industry-agreed plan. In line with good regulatory practice, Oftel used working groups and public consultations to tackle technical issues and, where possible, reach an industry-agreed consensus on the best approach.

13 Oftel's use of a lottery to allocate the new 118 numbers, combined with the existence of memorable number combinations and the opportunity for companies to trade numbers, resulted in one company benefiting from a windfall gain. The company drawn first in the lottery, Leaf Telecom Ltd, chose 118 118 and, without using it themselves, sold it for £2 million. On the basis of

legal advice, Oftel considered it did not have the legal authority to invite companies to make financial bids for attractive numbers or share financially in the subsequent number trading. Outside the context of directory enquiries, it had already recognised that some telephone numbers had a potential commercial value and consulted the Department of Trade and Industry (DTI) on the possibility of including provisions to charge for the allocation of numbers in future primary legislation. The DTI gave assurances that it would legislate at the earliest opportunity. However, there was no firm timetable for including the necessary provision in future legislation at the time Oftel was considering the allocation of 118 numbers. Oftel decided, therefore, not to delay the lottery. The 2003 Communications Act now provides Ofcom with the necessary powers to charge for the allocation of telephone numbers and to share any financial benefit from the transfer of numbers. This Act came into force on 23 July 2003, 14 months after Oftel allocated the 118 numbers.

14 Oftel recognised that replacing the well-known 192 and 153 numbers could confuse consumers. It used press releases and media interviews to raise consumer awareness and implemented a period of parallel running between the old and new services followed by a freephone message on 192 and 153 when they were taken out of service. Oftel judged, following consultation, that the benefits of a national publicity campaign would not justify the costs and, drawing on evidence from other countries, believed that company advertising would be the predominant mechanism of raising consumer awareness of the new numbers. Subsequent market research confirmed that callers were confused after the introduction of 118 services. There is now a higher level of awareness of the introduction of 118 numbers but continuing uncertainty over which services offer the best price.

15 ICSTIS⁸ is responsible for regulating premium rate telephone numbers and has taken on the day-to-day regulation of the advertising, promotion and content of directory enquiries services. It has developed a Code of Practice which sets standards for service providers. As at December 2004, ICSTIS had issued 10 warnings on behaviour and imposed 11 fines totalling £60,000 for breaches of this code, primarily for a failure to provide pricing information in advertisements or before call connection. Ofcom continues to monitor market developments to inform future regulatory decisions.

8 The Independent Committee for the Supervision of Standards in Telephone Information Services.



CONCLUSIONS AND RECOMMENDATIONS

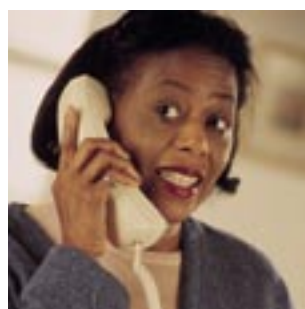
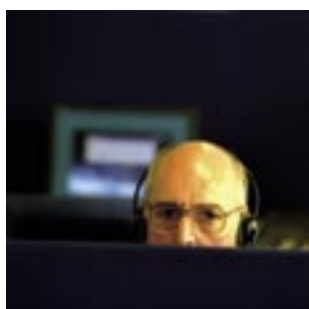
16 After one year of competition, two firms, BT and The Number, had gained 80 per cent of the market and a large number of small companies were serving niche markets. A small minority of residential callers use directory enquiries frequently, but the average residential caller uses the services less than once per month. The average caller is unlikely to be motivated to find the lowest price so the market is not driven by price competition. Market share is influenced more by numbers which are easy to remember and advertising.

17 Ofcom cannot yet demonstrate that, overall, consumers have benefited from liberalisation. Most residential consumers are paying more for directory enquiry services while the absence of reliable accuracy data on the previous services means that it is not possible to show whether accuracy has improved. But callers now have considerable choice and additional services. The market is still evolving and the reduction in the volume of calls to directory enquiry numbers might indicate that consumers are responding rationally by making more use of free alternative sources of directory enquiries information, such as the internet or the phone book. But there is also a risk that callers no longer use the services due to confusion over which number to call and perceptions about the cost of 118 services compared with the cost of the legacy 192 services.

18 The National Audit Office has made a number of recommendations for Ofcom as well as learning points that other regulators should consider in opening a market to competition (Appendix 6). A key issue for Ofcom is the scale and nature of its regulatory role in the directory enquiries market following the introduction of competition.

In any future market liberalisations, Ofcom should:

- a** **Ensure that assumptions used in cost-benefit analyses are tested rigorously.** Any future analyses should appraise a do nothing option; make full use of sensitivity analysis; and present low, base and high cases (paragraphs 1.15 to 1.20).
- b** **Assess the quality of the existing service and evaluate whether the proposed changes will improve the service to consumers.** In this case, Oftel did not undertake sufficient economic analysis of the likely benefits of alternative market structures, including no change, or take account of the unique characteristics of the directory enquiries service (paragraphs 1.21 to 1.25).
- c** **Exploit opportunities for sharing in a financial gain, as a result of the allocation of a scarce resource.** The 2003 Communications Act empowers Ofcom to do this and it should take care to identify suitable opportunities and exploit them (paragraph 2.18).
- d** **Consider how to improve communication to different consumer sub-groups.** Ofcom can learn lessons about identifying consumer concerns and raising consumer awareness amongst different sub-groups, for example the elderly, vulnerable or disadvantaged. Ofcom should consider, as appropriate, the use of a communications plan and draw on all available channels, including its Consumer Panel, to reach these sub-groups (paragraphs 2.20 to 2.25).



In regulating the competitive Directory Enquiries market, Ofcom should:

- e **Ensure consumer guidance and advice on finding the 'best deal' is available.** Ofcom could improve consumer confidence in directory enquiries by facilitating the availability of revised guidance on "shopping around" and the range of services available (paragraph 3.16).
- f **Monitor the effectiveness of competition in the market.** Ofcom should periodically analyse the market to understand its structural features and, where applicable, use available powers to encourage effective competition (paragraphs 16 and 2.25).
- g **Review whether all aspects of the code of practice remain relevant to the directory enquiries market.** ICSTIS adapted its code of practice for premium rate numbers to the directory enquiries market but some service providers believe that it imposes unnecessary restrictions on them. Ofcom and ICSTIS should ensure, in forthcoming consultations, that the provisions in the Code remain appropriate and whether the revised approach to protecting consumers in the use of premium rate numbers is applicable to directory enquiries (paragraphs 3.25 and 3.26).
- h **Continue to ensure equitable and cost-based access to the database of directory enquiry numbers is maintained.** BT owns and maintains the database of core directory enquiry information which is subject to regulation by Ofcom. Ofcom must watch that BT does not abuse its market position, so that a level playing field is maintained for service providers (paragraph 1.3 and Figure 3).

To secure the maximum benefit of competition for business and the public sector, Ofcom should:

- i **Encourage business and the public sector to exploit the opportunities created by the competitive directory enquiries market.** Business and public sector bodies could be more proactive in seeking the best price. In the first instance, government bodies should seek advice from the Office of Government Commerce Buying Solutions Agency on the advantages of centrally negotiated contracts. They should also ensure that their staff are trained in the use of directory enquiry services and are fully aware of the existence of free searches on the internet (paragraphs 3.20 and 3.21).

PART ONE

The decision to introduce competition



1.1 In September 2001 OfTel decided to extend competition in the provision of directory enquiries services. Before changing these arrangements, OfTel collected evidence to analyse existing provision and evaluate the likely benefits for consumers. This Part examines OfTel's approach.

The provision of directory enquiries

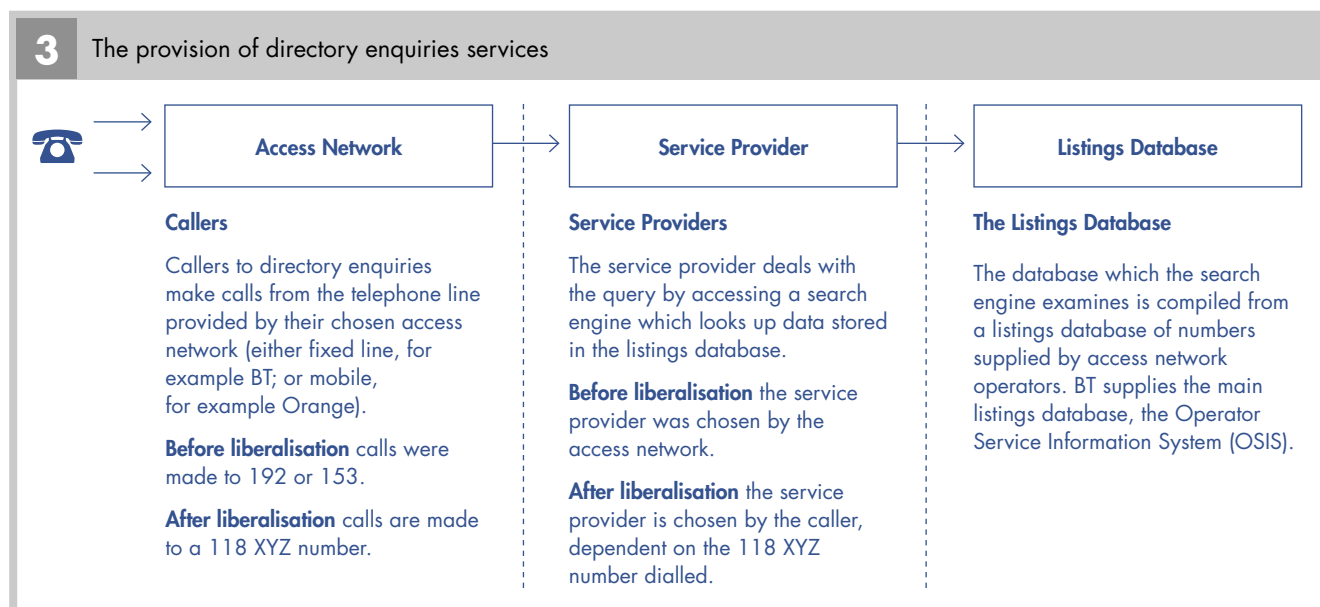
1.2 Before the liberalisation of directory enquiries, network operators were required to provide access to at least one telephone-based service as part of their Universal Service Obligation.⁹ Callers could dial 192 for numbers in the United Kingdom and 153 for international enquiries. There was virtually no competition at the consumer level, with just a few companies offering a business directory service using longer telephone numbers (for example, 0800 600900). This meant that callers were directed to the service offered by their network operator. The provision of directory enquiries services is explained in **Figure 3** and market statistics are in **Figure 4 overleaf**.

1.3 OfTel first considered the introduction of competition in 1997. After a public consultation¹⁰, OfTel altered BT Group Plc's (BT) licence to give all potential suppliers access to the core database of directory listings (Figure 3).

By 2000 five companies, four with experience of operating directory enquiries services overseas, had expressed an interest to OfTel in entering the UK market. But these companies considered that the requirement to use full length telephone numbers (for example, premium rate numbers) to access their services would put them at a disadvantage to network operators, who used the well-known 192 and 153 numbers. OfTel did not have enough three digit telephone codes for use in directory enquiries to overcome this problem and committed to a public consultation to review these numbering issues.

OfTel's statutory duties

1.4 The Telecommunications Act 1984 gave the Director General of Telecommunications, the head of OfTel, the duty to promote the interests of consumers in the provision of telecommunications services (**Figure 5 overleaf**). OfTel's overall goal was to achieve the best deal for consumers in terms of quality, choice and value for money. OfTel considered that to fulfil its duties it would promote competition where opportunities arose, as it believed that effective markets delivered the greatest benefits for consumers. This meant reducing barriers to competition where possible and only intervening where competition was not effective.¹¹ OfTel's intention was to encourage self-regulation in the industry whenever appropriate.



⁹ The network operators (British Telecom, Kingston Communications, cable and mobile operators), were obliged to provide itemised billing, access to the emergency services and directory enquiries services as part of their Universal Service Obligation. BT and Kingston Communications had to provide a telephone line on request and special tariff packages to help those people with special social needs and on low income.

¹⁰ OfTel, Provision of Directory Information Services and Products, September 1997.

¹¹ OfTel Annual Report 2002.

4 Statistics on directory enquiries in 2000

- 630 million calls per year for national numbers from fixed lines (192).
- 70 million calls per year for national numbers from mobiles.
- 25 million calls per year for international numbers (153).
- 60 per cent of all enquiries were from businesses.
- A typical residential consumer used directory enquiries less than once per month.
- The directory enquiries telephony market was worth approximately £300 million per annum.
- Other services included paper directories; internet-based services; and CD-ROM directories.

Source: Access codes for directory enquiry services, Of tel, November 2000

5 Of tel duties under the Telecommunications Act 1984

The Secretary of State and the Director General of Telecommunications shall:

- secure... such telecommunications services that satisfy all reasonable demands for them including, in particular, emergency services, public call box services, directory information services, maritime services and services in rural areas; and
- ... secure that any person by whom any such services fall to be provided is able to finance the provision of those services.

Subject to... the above, the Secretary of State and the Director shall... have a duty to exercise the assigned functions... in the manner which he considers is best calculated to:

- promote the interests of consumers... in respect of the prices charged for, and the quality and variety of, telecommunications services;
- maintain and promote effective competition...;
- promote efficiency and economy...; and
- promote research into and the development and use of new techniques...

NOTE

This is an abridged extract from the Act, focusing on clauses pertinent to directory enquiries.

Of tel’s case for liberalisation

1.5 Decisions on the appropriate regulatory action should be based on an analysis of the existing market and an evaluation of the benefits for consumers. Of tel collected evidence from a wide range of sources in order to inform its decision on whether to extend competition. The four components of its evidence base were: a public consultation; a consumer survey; observations of directory enquiries markets in other European countries; and a cost-benefit analysis.

The public consultation

1.6 Of tel sought to establish whether there was consensus among stakeholders in support of change and, in November 2000, issued a public consultation on the future provision of directory enquiries. The consultation drew on the results of a cost-benefit analysis (paragraph 1.15) and outlined the factors that restricted competition, including network operators’ monopoly of short access codes, and options for removing this obstacle. The consultation set out three options for changing the numbering scheme for directory enquiries:

- Option 1 – to retain 192 as the network operators’ access code, and allocate new entrants a five or six digit number from the 118 XY(Z) range;
- Option 2 – to replace 192 with another memorable default number, and offer new entrants a number from the 118 XY(Z) range; and

- Option 3 – to withdraw 192 and allocate 118 XY(Z) numbers to all operators, whether incumbent or new entrants.

Of tel was also willing to consider the benefits of retaining the existing arrangements and any other options put forward by respondents.

1.7 The consultation results showed strong support for retaining the 192 number. Twice as many respondents favoured retaining 192 compared to those who indicated a preference for its withdrawal. Views varied between stakeholder groups:

- **The majority of representatives of telecommunications consumer groups wished to keep 192.** Some suggested that mobile operators represented sufficient competition for fixed-line network operators. Most observed that directory enquiries were used infrequently by many consumers and that a new range of numbers using different pricing structures would cause confusion.

- **The majority of network operators, who already provided directory enquiry services, preferred to make no change.** Most suggested there was no evidence of consumer detriment with the existing regime or consumer demand which would warrant change. As a consequence they felt intervention was unnecessary.
- **New entrants preferred to remove 192 and introduce the 118 number range.** Potential new entrants argued that the introduction of a consistent numbering range was required to establish an effective competitive market and deliver the benefits of competition to consumers.

1.8 It was inevitable that the liberalisation would result in a range of opinions on the optimal approach, as companies had different vested interests in the outcome. Oftel followed good regulatory practice by consulting widely to establish the views put forward by different groups and evaluating the arguments put forward. It identified a conflict between the views of two groups: the consumers and the network providers, who questioned the rationale for opening the market to competition and raised the potential for confusion; and the prospective new entrants, who provided evidence from other countries to show the benefits of competition.

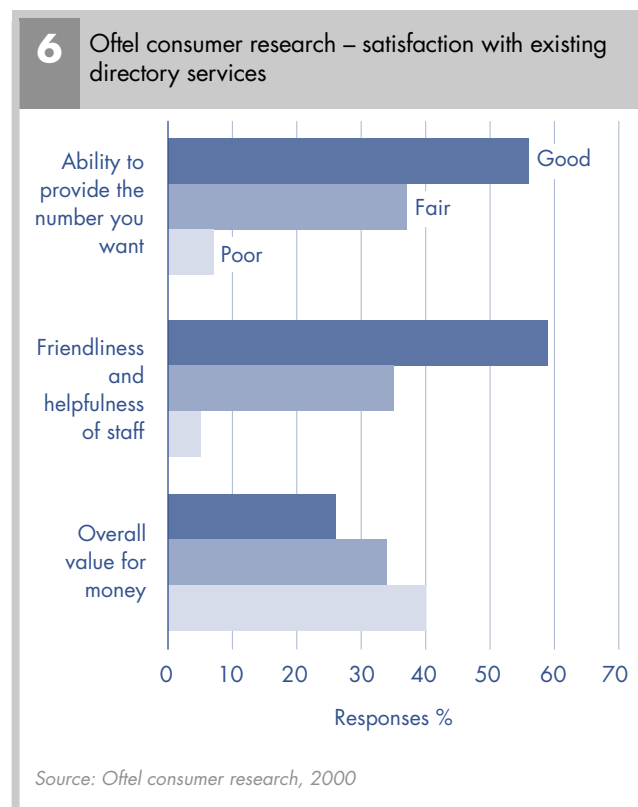
1.9 The results of the consultation reinforced Oftel's belief that the main barrier to competition was the use of 192 and 153 which gave network operators an unfair competitive advantage over new entrants. Our economic consultants, Oxera, supported the view that the numbering system was an important factor in enabling competition and that the advantages of 192 had to be removed from the owner to create a level playing field. Evidence from the French directory enquiries market supported this view as the incumbent, France Telecom, kept its existing short code (12) and subsequently retained 90 per cent of the market despite raising its prices (see Appendix 5).

Consumer research

1.10 As part of its evidence-gathering exercise, Oftel commissioned a survey to establish the views of residential consumers on their satisfaction with the existing provision of directory enquiries and the possible introduction of new services. Oftel stated that if consumers were satisfied, it could not authorise a disruptive process unless there was evidence of clear benefits.

1.11 The research showed that 90 per cent of callers were satisfied with their ability to obtain the number they requested, although 40 per cent felt that directory enquiries offered poor value for money (Figure 6). Half of consumers were unconcerned by the removal of 192 although, of those who indicated a preference, twice as many were dissatisfied as satisfied (Figure 7, question 2, overleaf). The results also indicated an indifference to the prospect of a wider choice of services – less than one in five consumers stated that a greater choice of services was important.

1.12 Oftel concluded that the results of the research were ambiguous and demonstrated ambivalence towards the proposed changes. In particular, Oftel considered that it was difficult to draw conclusions when consumers had no experience of the types of service a liberalised market might offer. Despite this, it did not undertake further analysis of consumer views, for example focus groups, to explore consumer motivation, preferences and priorities in more depth. Furthermore, there was limited dis-aggregation of results between sub-groups, such as the elderly or vulnerable, and no evaluation of the needs of business users. Full research results were published in February 2001. Oftel's announcement to liberalise in September 2001 concluded that consumers would be "satisfied or unconcerned if 192 was withdrawn".¹²



¹² Oftel summary: "The survey results indicate a marked ambiguity in attitude towards 192. When consultees were asked if they would prefer to keep 192 or see a new number range 118XX(X) with alternative services, 59% said they would prefer to keep 192. However, when asked how concerned they would be if 192 was withdrawn, 65% said that they would be either satisfied or unconcerned. Moreover, only 25% of consumers regarded the existing service as providing good value for money."

7 Ofcom's consumer research - possible changes to the provision of directory services

Question 1 "Which is more important to you?"

59 per cent said 'keeping the existing 192 number'

18 per cent said 'having a wider choice of services'

23 per cent said 'don't know'.

Question 2 "How would you feel if 192 was removed and replaced with a range of 5 or 6 digit alternatives in order to provide a wider range of directory enquiries services?"

16 per cent said 'satisfied',

35 per cent said 'dissatisfied',

49 per cent said 'don't mind/not bothered'.

Question 3 "If a number of new companies started offering directory enquiries services at different prices, or with different types or levels of service, do you think you would be more likely to start using these, or continue to use the 192 service?"

21 per cent said 'use new services'

56 per cent said 'use 192 service'

24 per cent said 'don't know'.

European comparisons

1.13 Ofcom supplemented its consumer and stakeholder analysis with an overview of the results of the introduction of competition in directory enquiries markets in Germany, Sweden and Ireland. The German and Swedish markets were liberalised in 1999, and the Irish in 2000 (Appendix 5). Two companies seeking to enter the UK directory enquiries market provided Ofcom with evidence of the caller benefits that had resulted from competition in Germany and Ireland. Ofcom sought to augment this evidence by requesting further information from international regulators and operators in Germany and Ireland.

1.14 Ofcom concluded that restructuring had led to significant competition in Germany and Ireland, which had led to a wider choice of higher quality services and a corresponding increase in value for money. Implementing these changes had not proved problematic for callers or industry. But there are questions over the direct comparability of the German and Irish markets to the United Kingdom. OVUM, Ofcom's consultants, observed that there were significant differences between the directory enquiries services offered by the incumbents in Germany and Ireland, and BT in the UK. Specifically BT's unit cost of provision was significantly lower, quality of service much higher and waiting times shorter. Despite these observations, Ofcom did not analyse the differences in more detail, nor did it explore the likely impact of these differences.

The cost-benefit analysis

1.15 To inform its consultation (paragraph 1.6), Ofcom commissioned Ovum, an economic consultancy, to undertake a cost benefit analysis to evaluate whether the economic benefits of introducing competition outweighed the costs. Ovum's objectives were to:

- identify options for changing the numbers which callers used to access directory enquiries; and
- use cost-benefit analysis to evaluate the options and to see, from the perspective of the UK economy, whether change was required.

1.16 Ovum evaluated three options for introducing alternative arrangements for phoning directory enquiries (paragraph 1.6). The economic analysis showed that the benefits outweighed the costs for all three options (**Figure 8**). Option 3 – to remove the 192 access code and introduce new 118 numbers – offered the highest net benefits to callers, with a net present value of £35 million.

1.17 Figure 8 shows that the main economic benefits arise from greater competition in the directory enquiries market. Ovum's analysis was based on the assumption that competition would lead to price reductions, increased demand for directory enquiry services and an increase in general telephone calls. The impact of call stimulation is stronger in Options 2 and 3 but there are also higher transition costs stemming from the need to establish new systems and promote the new services. Ovum's assessment of the likely outcomes was based on data available in 1999. A number of the assumptions used were significantly different to the out-turn, in particular, the expected call volumes and the predicted number of new 118 service providers.

1.18 The results of the cost-benefit analysis were highly dependent on the assumptions of demand for directory enquiries services. Ovum's baseline scenario was based on the existing trend of a five per cent per annum decline in call volume. Ovum considered two alternatives to this scenario: firstly, that the introduction of competition would stimulate growth; and secondly, that consumer confusion and the increasing use of text-based services would increase the rate of market decline. Ovum reflected these scenarios by varying demand against its baseline by plus or minus three per cent per year. These changes had a significant impact on the preferred option, ranging from a negative present value of -£136 million for a higher rate of decline to a positive present value of £207 million for a smaller rate of decline (**Figure 9**).

8 Results of the cost-benefit analysis

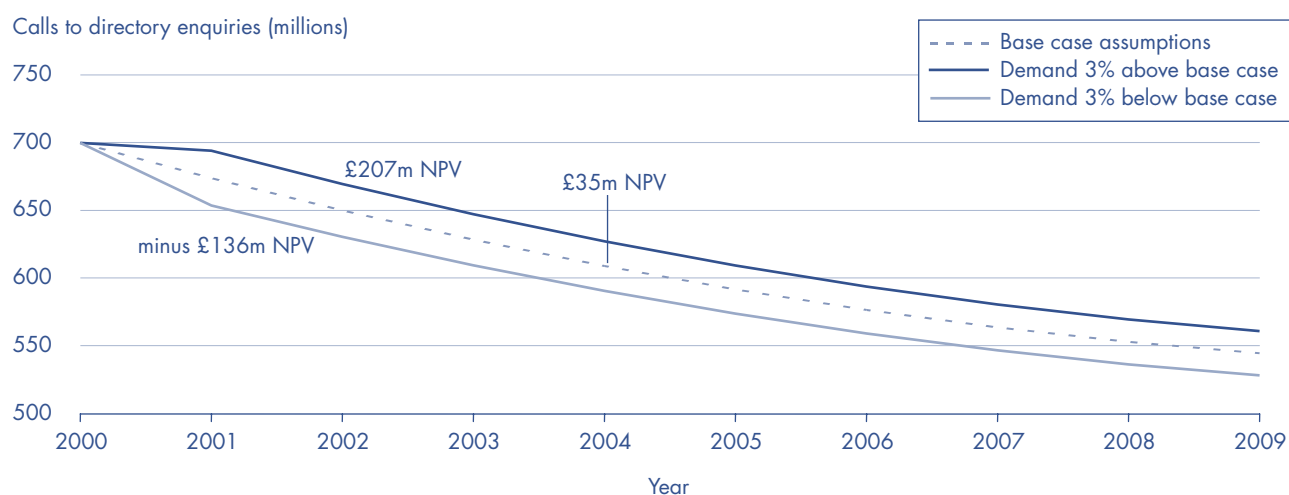
	Option 1: retain 192 and allocate 118 numbers to new entrants £ million	Option 2: replace 192 with another short number and offer new entrants a 118 number £ million	Option 3 - Preferred; withdraw 192 and allocate 118 numbers to all operators £ million
Net present benefits			
Benefits from price competition	22	54	98
Release of 192 code	-	4	4
Increased competition in supply of database	-	-	6
Total	22	58	108
Net present costs			
Dialling extra digits	(1)	(20)	(22)
Network and system changes	(1)	(6)	(9)
Misdials	-	(13)	(26)
Promotion of services	-	-	(16)
Total	(2)	(39)	(73)
Overall net present value	19¹	19	35

Source: Ovum cost-benefit analysis, 1999

NOTE

¹ This figure does not cast correctly due to rounding.

9 The impact of different demand assumptions on net present value



Source: National Audit Office

1.19 In cost-benefit analysis, sensitivity analysis can demonstrate how the outcome of each option changes as the input assumptions are varied. Ovum’s sensitivity analysis showed that varying the assumptions led to some significant changes in the net present values of each option. Option 3 represented the extremes of potential economic benefits, offering the greatest risk but also the highest potential benefits (**Figure 10**). Option 1 remained positive under all scenarios and represented the highest net present value in many cases where assumptions were varied. Ovum’s sensitivity analysis was based on testing changes to only one variable at a time. There was scope to enhance the analysis by conducting a multivariate analysis, where more than one sensitivity at a time is altered, to test further the variations in the assumptions used and their effect on the outcomes.

1.20 The cost benefit analysis did not include a pure ‘do nothing’ option, which would have considered allowing network operators to continue to use the 192 and 153 numbers and requiring new entrants to use premium rate or other full length telephone numbers. All three of Ovum’s options included opening a 118 number range for new companies entering the market.

The collection of further evidence

The level of service pre-liberalisation

1.21 Pre-liberalisation, Oftel monitored the price of directory enquiries services provided by network operators. It sought to ensure callers received good value for money by comparing prices on different networks with international markets, and ensuring prices were cost-reflective. Oftel also monitored the fees charged by BT for access to its database of telephone numbers. On the basis of this analysis, Oftel was satisfied that callers were not being over-charged for directory enquiries, although it did believe that there was scope for greater price competition.

1.22 Oftel did not monitor the quality of directory enquiries services provided by the network operators, other than the requirement to answer 70 per cent of calls within 15 seconds – which was being met. It had not received a significant volume of consumer complaints about the accuracy of 192 and 153 services and, therefore did not have concerns over the accuracy of the service provided. This was consistent with other European countries, which also had few public concerns about the accuracy of directory services before liberalisation. In the absence of any obvious consumer detriment, Oftel did not set accuracy targets and, consequently, did not evaluate the accuracy of existing directory enquiry services.

10 Cost-benefit analysis – sensitivity analysis

	Net present value (£million)		
	Low	Base	High
Option 1: retain 192 and allocate 118 numbers to new entrants	9	19	30
Option 2: replace 192 with another short number and offer new entrants a 118 number	-8	19	45
Option 3 - withdraw 192 and allocate Preferred: 118 numbers to all operators	-50	35	121

Source: Ovum cost-benefit analysis

1.23 Oftel had, however, identified concerns over the range of directory enquiries services offered, especially by the fixed line network operators. Prior to liberalisation, a greater range of directory enquiries services was available to callers from mobile phones. For example, mobile operators offered services such as call connect, where the caller is directly connected to the number they have requested; text back, where the requested number is texted to the mobile handset; and a business location services. Oftel therefore concluded that fixed-line network operators were not innovating and set the expansion of consumer choice as one of the objectives for liberalisation.

Analysis of a competitive directory enquiries market

1.24 Our economic consultants, Oxera, observed that opening a market to competition does not necessarily lead to a competitive market (see Appendix 2). In establishing the rationale for and approach to liberalisation, it is important for the regulator to understand the key characteristics and potential limitations of alternative market structures. Although the economic appraisal evaluated the costs and benefits of different scenarios, Oftel did not conduct a full economic analysis into how a market with the unique characteristics of directory enquiries would function, or how far a competitive market would deliver the expected benefits for callers. Rather, its understanding of the characteristics of a competitive market was drawn from a combination of the cost-benefit analysis and the evidence of liberalisations in other European countries (paragraphs 1.13 and 1.14).

1.25 The outcome in a competitive market is likely to depend on the extent to which different consumer groups are influenced by advertising, price and other factors. A fuller analysis of the determinants of consumer behaviour would have provided a better understanding of its effect on competition. For directory enquiries, the main factors include:

- price sensitivity influences the extent to which effective price competition is achievable. The low level of annual spend on directory enquiries makes it unlikely that most residential callers will be motivated to find the best price. This has implications for the regulator in determining the objectives of liberalisation, providing price information and its future regulation of the competitive market;
- another unusual feature of the market is the inability to price discriminate between individual service users. This can act as a counter-weight to price insensitivity and means that all callers can benefit if companies lower their prices to attract those callers who are more price sensitive;
- number memorability can be beneficial for callers but research shows that demand for directory enquiries services is influenced by advertising rather than price or value for money.¹³ If consumers are more responsive to advertising, the incentive to offer value for money may be limited. As a counter-balance, ICSTIS's code of practice requires all advertisements for 118 services to include pricing information (paragraph 3.14); and
- 'golden numbers' can distort competition by giving some suppliers an inherent competitive advantage. This is particularly important in a market which is price insensitive and influenced strongly by advertising. In such circumstances, golden numbers are likely to have a commercial value.

Oftel's decision

1.26 On the basis of its evaluation of the evidence, Oftel concluded that there was not a compelling case to retain the existing market structure and that regulatory action was justified to stimulate competition. In September 2001, the Director General of Telecommunications announced the decision to open the market to competition. Oftel believed competition would deliver:

- improved quality of service (accuracy, time taken to answer and helpfulness);
- greater price competition; and
- increased innovation and choice.

1.27 Oftel concluded that the network operators' monopoly of the 192 and 153 numbers should be removed in order to enable new entrants to compete effectively. Oftel therefore decided to introduce a consistent numbering range for all operators. It believed that the other options would not exert the necessary competitive pressure on network operators.

1.28 Our economic consultants, Oxera, observed that there is scope for conflict between what consumers want and the process of establishing a competitive market. Oftel considered the views of the industry and consumer groups but also took account of evidence from the cost-benefit analysis and, particularly, the outcome of liberalisations in Germany and Ireland.¹⁴ Faced with conflicting interests, Oftel followed its regulatory principles of promoting competition (paragraph 1.4) and concluded that callers would gain most from the creation of a competitive market and that the potential benefits outweighed the risk of confusion. One year after making this decision, a European Commission Directive subsequently required Member States to abolish all exclusive and special rights with regard to the provision of directory enquiry services.¹⁵

¹³ Research conducted by Ofcom and ICSTIS in November 2004 sought the views of over 2000 people on their rationale for choosing a 118 provider. 24% cited advertising recall, 18% said the ease of remembering the number. Only 5% said because it was 'cheap' and 2% because it was 'accurate'.

¹⁴ Oftel found that British consumers were not benefiting from the same wide range of services and price competition as consumers in other countries.

¹⁵ European Commission Directive 2002/77/EC of 16 September 2002 on competition in the markets for electronic communications networks and services.