

## **APPENDIX 4:**

### **UK Business Telecommunications Price Index**

#### **A. Business Model**

##### **A-1. The fixed line market**

The UK business sector is dominated by British Telecom (BT), accounting for some 52% of call revenues in Q3 2000. Their main competitors are the cable service providers ntl and Telewest, with some 21% of the market but BT still enjoys monopoly control of telecoms infrastructure with 83% of the revenue generated by ownership of lines and exchanges (this is closely monitored by Oftel).

##### **A-2. The mobiles market**

The mobiles sector is more competitive with four main players (Vodafone, Orange, BT Cellnet and One2One) controlling the entire market. Clear differentiation between the business and residential sectors is impossible to achieve as there is no separate billing structure for business use. We currently assume the same percentage split between business and residential use in the fixed-line sector which allows us to attach a proxy value to the turnover generated by businesses in the mobile market. This is not ideal but we are investigating using the results of an Oftel survey on business use of mobiles in our model.

## **B. Government Regulation**

The Office for Telecommunications (OfTel) regulates the telecoms market in the UK with a licence system for all operators, which they use to ensure genuine competition and minimum standards of service across the industry. As part of their remit they are empowered to enforce price controls where necessary by studying the price structures of the market in close detail.<sup>1</sup> Their monitoring role constitutes a compulsory quarterly census of activity and prices in both the fixed-line and mobiles markets.<sup>2</sup>

## **C. Pricing Methodology**

Since 1998 the UK has been publishing a quarterly price index based on the rate method. We are now looking to replace this with a methodology based on unit values which will feature a prolonged consultation exercise. Using quarterly census information collected from all UK telephone companies we have pursued a common methodology between the fixed-line and mobile markets to overcome the initial problems experienced using the rate method.

### **C-1. The rate method**

The UK CSPI was initially constructed using rates for set profiles of typical customers. In the business sector of the fixed-line market, profiles were established for small, medium and large businesses with rates taken from a private telecoms analysis service. However, it soon became clear that the model did not adapt sufficiently to market changes as it excluded both Internet call-up fees and call charges between the fixed-line and mobiles markets. On closer analysis it was apparent that further work was required to accurately reflect weights and call minutes and to gauge the effect of discounting.

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<sup>1</sup> 'Proposals for network charge and retail price controls from 2001' – Statement from the Director-General of OfTel, Feb 2001. A response to the 'Price Control Review', Oct 2000.

<sup>2</sup> The quarterly OfTel publications 'Market Information: Fixed Update' and 'Market Information: Mobile Update' are available on the web at [www.oftel.gov.uk/publications/market\\_info](http://www.oftel.gov.uk/publications/market_info).

For the mobiles market the rate model was based on the number of free call hours available in a month i.e. one, three, four or nine. Rates were taken from the monthly consumers magazine 'What Cellphone' but these changed very rapidly and the choice of replacement rates was one of the key weaknesses of the index. They were often selected as simple substitute rates and failed to reflect the migration of subscribers to more competitive rates in a fast-moving market. The 1995 base year compounded the inflexibility of the model by not measuring influential new products such as SMS (text messaging), roaming and WAP. Weights within the model, as well as the model itself, were rapidly becoming out of date and it was clear that the choice of the freetime variable was becoming less relevant as the importance of other variables rapidly increased. Moreover the inability to measure discounting was also becoming problematic as businesses used their influence to increasingly agree flexible deals within a competitive market place. Consequently the overall index for the mobiles market appeared too stable at a time when competition was assumed to be driving prices down.

## **C-2. The unit value method**

The quarterly census, which is compiled by the Oftel, is available some three or four months after the reference period which will necessitate some estimation procedures. However, it is this source of data that we have sought to exploit in re-launching the business telecoms price index in the UK.

### *C-2-1. The fixed market*

The quarterly census data on the fixed-line market is detailed enough to clearly distinguish between business and residential users for local calls, national calls, international calls, calls to mobiles and other calls as well as connection fees and line rentals for the whole of the industry. The 'other calls' category encompasses many services including Internet call-up fees that the CSPI would prefer to cover separately – this may be possible in the future. The strength of the census approach is that Oftel captures all revenues generated by licence holders in the telecoms sector – including those generated by new products which is an important consideration in an industry which is constantly finding new ways to transfer sound, images and data. The unit values are based on revenue per minute, connection or line.

### C-2-2. The mobiles market

The quarterly census in the mobiles sector identifies revenue and volume data for connection fees, SMS and 'all calls'. We are awaiting more disaggregated data for 'all calls' from Oftel for 1999 which will allow the UK to improve the homogeneity of this sector. The unit values are based on revenue per minute, connection or message.

### C-2-3. Chainlinking

With the Oftel census data at our disposal we have the appropriate detail to rebase every year to reflect the most recent developments in the industry. The tables below illustrates the rapid changes in annual weights in the fixed-line and mobiles sector between 1997 and 2000.

Fixed-line: business									
	Variable (calls)					Fixed			
	Local	National	Int'l	Calls to mobiles	Other	Connec tion	Rental	Total variable	Total fixed
1997	20.8	25.9	21.6	13.9	17.8	11.4	88.6	72.8	27.2
1998	18.8	24.7	19.2	15.1	22.1	10.5	89.5	72.8	27.2
1999	16.1	23.9	17.0	15.6	27.4	10.3	89.7	71.9	28.1
2000	14.6	22.4	15.9	17.4	29.7	9.3	90.7	70.7	29.3

Mobiles: all			
	All calls	SMS	Connection
1997	97.5	0.0	2.5
1998	97.5	0.0	2.5
1999	96.9	1.4	1.7
2000	92.9	6.1	0.9

A simplistic weighting of each year with its specific weights revises the overall business telecoms index down by up to 4% when compared to the base year of 1999=100. A more robust use of annual growth rates generates small downward revisions of little more than 1% (see table below). Chainlinking is a time-consuming and complicated process which may create a presentational problem for our customers in losing additivity and creating regular revisions. It is apparent we need to question whether this element of the UK CSPI

requires what would be a unique methodology in the short term, creating a hybrid overall CSPI. This will form an important part of our consultation exercise.

Total business telecoms: 1999=100 and chainlinked variants (1999=100)			
	1999=100	Annual re-weight	Annual growth rate
1997 Q1	148.6	143.9	146.9
1997 Q2	148.9	143.9	147.2
1997 Q3	149.9	144.8	148.2
1997 Q4	139.3	134.7	137.7
1998 Q1	133.3	131.4	133.3
1998 Q2	130.7	128.6	130.7
1998 Q3	126.9	125.4	126.9
1998 Q4	111.0	110.8	111.0
1999 Q1	108.9	108.9	108.9
1999 Q2	102.2	102.2	102.2
1999 Q3	96.6	96.6	96.6
1999 Q4	92.3	92.3	92.3

#### *C-2-4. Conclusion*

The unit value approach based on census data gives the true cost to the consumer of using telecommunications services although whether this equates to an accurate representation of output costs is more open to question. However, the ONS favours the unit value method for the CSPI primarily because it is based on a true census of activity that will identify revenues from every product within the industry.