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40 years on: An account of innovation in the regulation of UK telecommunications, in 3½ chapters

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ABSTRACT

The past nearly 40 years have seen major developments in telecommunications networks and services, and in how they are regulated. This paper describes innovations in UK telecommunications regulation which have taken place over the period, broken down into stages, beginning with the regulation of the former monopolist by an independent regulator under a price cap, continuing the regulation first of mobile and then, under European Directives, of copper-based broadband, and ending with the diffusion of fibre networks. It is argued that a variety of changes have reduced the scope of innovation over the period, including domestic institutional reform, the limits placed on later decisions by earlier ones (path dependency), and the constraining impact of European Union law and regulation. The paper concludes with some consideration of the effects on future innovation of the UK's withdrawal from the EU.

1. Introduction

The birth of *Telecommunications Policy* in 1976 (to which this Symposium is dedicated) preceded by a small margin the start of a continuous period of reform of telecommunications in the UK. The legislative foundation of this process was the passage of the Telecommunications Act 1981 which led to the privatisation and regulation of British Telecommunications (later BT) in 1984. This Act was partially superseded by the Communications Act 2003, but the process of revision continues to this day with Ofcom's 2016 strategic review of digital communications.

Over this period, the UK was responsible for introducing a number of innovations in the regulation of telecommunications networks and services, on either a global or a European scale, including: incentive regulation, a duopoly policy, promotion of cable/telecommunications competition, a set of multiple wholesale interconnection products, mobile termination regulation, spectrum pricing and markets, and operational separation. As shown below, some of these worked well, some less well. Some were integrated into European or global practice, some had to be abandoned or were confined to the UK.

This article reviews these decades of learning to regulate by doing, not as an economic history of the sector but from the standpoint of examining the changing factors which promoted regulatory policy innovation. Even in this respect, it does not aspire to be comprehensive. The focus is on the regulation of competition in networks and services. Thus discussion of the process of privatisation, of the merits of independent regulation, of universal service issues, and of more recent internet-related themes is largely absent; this is largely dictated by reasons of space.

For the purposes of this exercise, this history is divided into three completed and one incomplete chapter:

– privatisation, the start of regulation and the duopoly policy (1980–91)

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– a focus on infrastructure competition (1991–2003)
– the European regulatory framework , the formation of Ofcom, the partial separation of BT and copper unbundling at breakneck speed (2003–2010)
– adapting to fibre (2010–).

Sections 2–5 are devoted to these topics. Section 6 seeks to draw some lessons, and to look ahead to the UK's exit from the EU.

2. Privatisation, the start of regulation and the duopoly policy (1980–91)

2.1. Legislation, privatisation and institutional framework

The Thatcher government elected in 1979 quickly turned its mind to telecommunications, spurred on by the concern that the UK's public sector monopoly supplier was starved of funds. It also reviewed the structure of the sector and in 1981 passed an Act which allowed some competition in value-added services and made provision for additional licences to be made available.

Initially the government developed proposals to break up BT in public ownership, but then in 1982 it almost stumbled into a policy of a majority privatisation of the company as a single integrated firm. This intervention took first place in what was to be a long line of UK network industry privatisations, including energy, water and rail. The decision was implemented in the 1984 Telecommunications Act, which also set up a regulatory framework for BT and the sector (for an account of the history, see Parker, 2009, Ch. 11 and 12 and Spiller and Vogelsang, 1996).

At the start of the 1980s, BT itself was the repository of regulatory powers over the sector – a situation which was clearly unsustainable in an era of competitive operators. At the same time, the Government's financial advisers asserted that politically driven direct regulation by a ministry would frighten investors in a privatised company. Accordingly, having decided not to entrust regulation to the UK's competition authority, the Government created an independent regulator, the Office of Telecommunications (Oftel), headed by a Director General of Telecommunications. The first DGT was Bryan Carsberg.

2.2. Incentive regulation

How was a privatised BT to be regulated? This issue was addressed in 1982/3 within government at several levels. A working group of officials initially proposed a form of rate of return regulation, following extensive US precedent, but this was anathema to the Government's more radical advisers. They were familiar with the problems of cost-plus pricing in general (particularly, the lack of an incentive to cut costs) and of rate of return in particular (the Averch-Johnson effect, which encourages over-investment if the cost of capital is overstated). They were also enthusiasts for competitive solutions, and hoped that the period of regulation might be nasty and brutish, but at least short.

One such adviser - Alan Walters - proposed an 'output-related profits levy', intended to give BT an incentive to increase output by lowering prices. However, the recommendation which eventually triumphed, from Stephen Littlechild, was to establish what came to be called a price cap, which essentially involved setting a trajectory of prices for certain outputs of the regulated firm for a period of years, and, in effect, challenging the firm to increase profit by reducing costs, on the footing that, within the price control period, the residual legatees of any cost savings were the investors themselves, who would have a strong incentive to persuade the managers to do what was required.[2] The cap would be set in real terms, with prices changing according to the formula RPI-X, where RPI represented the increase in the Retail Price Index and X the decrease in price stipulated against that baseline.

However, as always, the devil lies in the detail. Two very large details were the level of X and the coverage of the cap – the number of services to be controlled, and any 'sub caps'. BT, Government officials and their advisers wrangled extensively over this in the prelude to privatisation- a value of 3 for X largely being arbitrated by ministers on a judgemental rather than a modelling basis.

Littlechild proposed that the coverage of the cap be confined to local calls only, allowing other voice services to be controlled by actual or potential competition. However, in the event, concerns about BT's market power caused the coverage to extend further to quarterly rentals and national calls as well. Finally, to prevent too sudden an increase in rentals, BT volunteered a cap of RPI+2 to be placed on them. On this basis, 50.2% of BT shares were sold (about half to retail investors) in mid 1984.

There is some debate about the existence of price cap precursors in other regulatory jurisdictions, but little doubt that in Europe both privatisation and the RPI-X approach were novel. Subsequently, incentive regulation was quite widely, but not universally, diffused in telecommunications throughout the US, in the UK in other sectors, and in some other regions in the Anglosphere, notably Australasia, to control both wholesale and end user prices. But it was less widely used in the EU.

2.3. Competition: the founding of Mercury and the duopoly policy

The 1981 Act permitted limited licensed entry in leased circuits, but the entrant (Mercury, a joint venture by a consortium including the telecoms firm Cable & Wireless, a bank and an energy company) persuaded the Government to offer it a wider and unique licence for long distance and international services, over the period including the Duopoly Policy from 1984 to 1991. The logic underlying this policy was that a single entrant would present a bigger challenge to the historic monopolist than multiple

[2] See Littlechild (2003) for an account of the circumstances in which the RPI-X proposal was developed.