Competition in broadcasting – consequences for viewers

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The PSB Review Stage 1 document has attracted criticism for its optimistic assessment of the consequence for viewers of a market place for television broadcasting without significant intervention in the form of provision of public service broadcasting, either funded directly via a licence fee or procured by licence obligations on public or private broadcasters.

This note reviews the arguments made and sets out in more detail the basis for the original conclusion in the consultation document.

1. *Competitive broadcasting markets*

Broadcasting is characterised by two key characteristics, the first of which forms the basis for the claim that markets will fail to meet consumer's known preferences:[1]

- low/zero marginal costs of an additional viewer, created by high fixed costs
- the co-existence of different forms of finance (advertising and pay-TV).

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[1] This is a separate question from whether it is the case, in J. Reith's words in 1922, 'that few know what they want, and very few want what they need.'

Clearly, broadcasting is not unique in either respect, as many products have disproportionately high first copy costs (magazines, films, motor vehicles, a new chemical entity with pharmaceutical potential), and many markets combine revenue streams of different kinds. As a general rule, fixed costs are recovered in markets by a range of price discrimination and bundling strategies, and the question in relation to sources of finance revolves around whether the outcomes generated by markets match consumer preferences and promote economic welfare.

More concretely, we assume in our competitive market place that there are no spectrum-related barriers to entry and that channels have a choice of revenue source (including hybrid solutions) subject to a break even constraint, and that technology permits a range of more or less sophisticated pricing options. We also assume that at any moment households have different (and time-varying) tastes and will watch the channel which yields them the maximum utility net of cost (including prices paid and the annoyance of advertisements), provided that is not negative (in which case they will do something else).

If we think of consumers' first choices as located at points on a circle, defined by genre or some other programme characteristic which determines viewer choice, then some parts of the circle (drama, comedy, soaps, news) will be more populated than others.[2] In a competitive environment we expect more channels to be located there; as a corollary,

[2] A circle is a more persuasive representation of the location of tastes than a line – such as Hotelling's beach – because a circle, unlike a line, has no end point. There are thus no 'extreme programmes'.

underpopulated parts of the circle will not attract many suppliers, and viewers may either not get exactly what they want, or may get nothing at all. Thus an enthusiast for Italian opera may have to watch Wagner, or switch off entirely, while there may be several shopping channels.

With no barriers to entry in the market place, a programme will be available if its revenues (from advertising or charges) exceed its costs, and competitive entry will tend to drive out excessive profits. First, it is natural to ask where revenue is maximised by advertising finance and where by pay TV. This depends on the nature of consumer demand. If demand for a programme is inelastic, the provider can capture considerable sums by charging a fee.[3] This seems to apply to sport, first run movies, pornography and possibly to elite cultural programming. Conversely, if the demand characteristics lead to a relatively flat demand curve, such that viewers will watch it but not to pay a lot for the privilege (eg general entertainment), then advertiser finance will be more remunerative.[4] Such programmes will typically have large audiences, but the category may include some with low audience and commensumately low costs.

This forms the basis for an expectation that a competitive broadcasting market will have (generally) large-audience advertiser-financed programming and smaller (but not necessarily very small – see Sky Sports) pay channels. With both advertiser support and

[3] More likely, the broadcaster will pursue a more sophisticated pricing structure like the one discussed in fn. 7 below.
[4] This will depend crucially upon the demand for and supply of commercial home minutes, which determine their price and the advertising revenues which pay TV financing has to beat. Conditions in the advertising market thus have a major influence on outcomes in broadcasting, although this link is not considered further here.

pay-tv there will be a tension between giving the viewers exactly what they want (a programme located exactly where they are located on the circle) and accumulating a large enough audience to make a more costly programme, which does not meet all viewers' preferences exactly. The market will determine this outcome, and it will vary from genre to genre.[5]

On the issue of whether suppliers' choice of funding also advances consumers' welfare (as well as maximising producers' profits), it is likely that it will go some way in that direction, although there may be too little advertiser-supported television.[6] The logic here is that pay TV has the greater chance of allowing programmes to be profitable (by capturing consumer surplus) when demand is inelastic – ie when some viewers value a programme highly but enthusiasm tails off quickly outside the fan base. In such cases, advertiser finance would generate insufficient revenues. There will still be a welfare loss associated with price lying above marginal cost with the resulting audience exclusion, but this is mitigated in practice by more sophisticated pricing schemes.[7]

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[5] The question of whether a market of this sort – with freedom of entry, product differentiation, and complex charging – exhibits 'optimal variety' has not been definitively answered. It depends on the precise configuration of consumer tastes and the degree to which alternative combinations of programmes satisfy them. This possible departure of the market outcome from the social optimum (in either direction) applies in all industries with the characteristics described, and is not normally a basis for intervention in, say, the supply of local shops, where entry is also free and the shops are geographically differentiated.

[6] See Owen and Wildman *Video Economics*, 1994, pp. 124-131. The qualification noted at the end of the sentence in the text is based on simulations, and for that reason is not conclusive.

[7] In pay TV, this predominantly involves bundling. Suppose half the audience will pay 10 for a sports programme and 3 for a film, while the other half will pay 10 for a film and 3 for a sports programme. By offering either programme for 10 and the second in addition for 13, the broadcaster attracts the whole audience for both programmes. Exclusion is thus eliminated even though price is positive. More generally, if willingness to pay for different types of programmes is negatively correlated, the combined demand curve will be flatter than any of the individual curves, and a positive price for the bundle will have a smaller exclusionary effect. A second technique is 'windowing' – making a programme available first at a high price, and then at lower prices in subsequent showings.

Conversely, when there is mass demand with a fairly high degree of price elasticity, and when a positive price would therefore choke off a lot of viewers, losses from audience exclusion will be high and advertiser finance will generate more welfare than charging. There are thus grounds to believe that the market place will produce an outcome which reduces the sum of the losses associated with pay-TV (audience exclusion) and with advertiser-finance (the bias against high value minority programming).

2. *Implications of the analysis*

It is thus possible to address in the light of the above analysis some of the criticisms and questioning of Ofcom's arguments:

- *The result of competition will be fragmented audiences and low-cost programming, financed by charges:* the analysis suggests that the market will sustain a small number of high-audience advertiser-supported channels, some strong pay-TV channels offering sports or monies, advertiser-financed or pay channels serving minority audiences, and a number of 'hybrid' channels relying on both advertising revenue and charges.
- *The outcome will be similar to the US:* since the US is effectively a multi-channel market with free entry, it is not surprising that its structure matches that predicted above. Its larger size, however enables it to sustain more channels of all kinds.
- *The outcome of a competitive market will be similar to today's 'multichannel' services – excluding channels 1-5*: what these services provide is conditioned by what is available on terrestrial PSB services. It is therefore mistaken to assume

that because high-quality home-produced drama is not presently available on non-PSB channels, it would cease to be available if public service channels were removed. Absent such channels, other broadcasters might fill the gap.

- *In the competitive market place some programme types will disappear*: the requirement for successful entry of a programme or channel is that incremental revenue exceeds incremental cost, where incremental revenue is conditioned on what is available on other channels. As a consequence, some broadcasters in crowded areas will fail and in the case of some programme types (at some points on the circle) there will be insufficient viewers to support even a single supplier.
- *Particular programme types, such as drama, would not be supported*: this is not possible to predict, but obviously high cost programmes attracting low audiences either at the profit-maximising price or at a zero price (under advertiser finance) will be the most likely candidates for disappearance. Much broadcasting will be available in channels, or bundles of channels, rather than as pay-per-view, and broadcasters may offer loss-leaders to gain subscriptions or maintain the brand.
- *The failure to supply programmes is a sign of market failure:* the basis for this argument seems to be that it is a market failure if either a good where total consumers' willingness to pay at a marginal cost price is not produced, or if price deviates from marginal cost. But this is a test of market failure and public intervention not applied elsewhere in the economy. It would imply public intervention in, for example, publishing of books and magazines, making movies and a host of other activities in the cultural industries, and more widely elsewhere where there are fixed costs, for example in most manufacturing industry.

- *The preferences of some categories of viewers are under-represented in the outcome*: clearly pay TV providers focus on those with the greater willingness to pay (determined in part by income) and advertiser-supported broadcasters focus on more valuable demographics. The search for willing buyers is a defining characteristic of markets, not an indication of their failure. The more fundamental question is whether specific groups lose access to programming which remains available to others. This is determined firstly by the success of policy towards the coverage of transmission networks (terrestrial, cable, satellite) and availability of reception equipment. If those problems are solved, then viewers of all types have access at zero incremental price to all free-to-air broadcasting –by the argument above a significant amount, as well as to pay TV.
- *A competitive broadcasting market will exhibit sub-optimal levels of innovation:* there is no general answer to this question. Willingness to invest in innovative programming depends on a range of factors, including companies' discount rates, attitudes to risk and market structure. A focus on short term returns will discourage innovations which require time for an audience to build and company attitudes toward those responsible for 'failures' will influence internal incentives. (This is obviously true for all broadcasting organisations, whether public or private.)

  Evidence from other sectors suggests that investment in R & D is low in monopolies and in highly competitive industries and highest in oligopolistic industries. As oligopolists, general entertainment channels should find it worthwhile to invest in innovation. It is not possible to forecast the outcome of these forces nor to define the optimal level of spending or innovation (if this could be measured.)

- *Competition would lead to a migration of programming from free-to-air to pay channels (compared with 2004):* in the UK, more broadcast hours of sports and movies are on pay TV than on free-to-air. In relation to these genres, the free-to-air commercial channels, including PBS channels, appear to make acquisition decisions largely guided by commercial considerations. There is no obvious reason to expect significant additional 'siphoning' to pay TV in a competitive investor – owned broadcasting market. The key exceptions are the listed events which by virtue of their demand characteristics (highly inelastic demand) are candidates for pay-TV. In a commercial world, this outcome can be avoided by continuing the listing arrangements but at the cost of some distortion of competition.
- *There are still good 'citizen' –based grounds for public service broadcasting:* this is a proposition which has not been analysed here.

3. *Conclusion*

Conjecturing the shape of a competitive broadcasting market place without PSB is a difficult task. Some of the assumptions commonly made, about the fragmentation of audiences and the dominance of pay TV seem implausible. The view that innovation would be stifled is widely held, but not self-evidently true. This note has only discussed market failures, and to the extent that citizen-based arguments for PSB are accepted, they may also eliminate some of the residual risks relating to market failure.