

## **A Consideration of Aspects of the Pay-TV Market in the UK in the Absence of Public Service Obligations**

Mediatique Limited  
24 August 2004

### **SUMMARY**

*In this paper, based on analysis completed for OFCOM for the review of Public Service Broadcasting (PSB), Mediatique investigates how the UK market would have reacted in the absence of the BBC and any PSB obligations. We look at the likely size of both the advertising-supported and pay-TV markets in this "clean start" scenario and, in particular, at whether a home-grown HBO-style channel could have been sustained in the UK. We conclude that the amount of money capable of being generated in the UK on our assumptions would, at best, support a channel with a programming budget of £113m, equivalent to Sky One's current budget and 30% less than that of Five. This suggests that a "UK HBO" would not be able to broadcast material similar in range and quality to that of its US variant, and that the relevant differences in market size make a US-scale original programming and films service uneconomic in the UK. A stripped-down version could well survive, but would do so on much lower revenues and costs than in the US. This is the case even if the entire BBC licence fee were to be "available" to pay-TV subscription channels, based on Mediatique's "read-across" analysis of the US market and HBO in particular.*

*The information provided in this paper reflects the assumptions and views of Mediatique, and not necessarily those of OFCOM.*

Mediatique was asked by OFCOM to consider scenarios under which the BBC never existed and public-service broadcasting (PSB) obligations were assumed never to have been imposed in the UK marketplace. The exercise was aimed at considering the theoretical limits to a non-PSB environment – not as a policy choice but as a way of judging the implications of retaining PSB against a measurable alternative. Our work in this regard was labelled "the clean start".

In this exercise, Mediatique made a number of assumptions to come to some preliminary conclusions. A crucial aspect of the work undertaken by Mediatique was to consider whether, in the absence of the BBC and any imposed PSB programming requirement, a private-sector broadcaster would have chosen to broadcast programming deemed to be "public service". In other words, what would the market have done "naturally" had there not been obligations and had the BBC never existed? And what would consumers have done in reaction? Crucially, in this analysis, it is important to consider how much viewers would spend on television in the absence of the BBC licence fee. Would the entire £2bn spent on television by the BBC on the licence-fee payer's behalf be voluntarily spent by consumers on pay TV?

Our first assumption, based on an analysis of the US market, concerned the likely behaviour of mass-market terrestrial channels. These operators were likely, in our

view, to concentrate on the core demographic of 16-49 year olds, offering long-run series, sitcoms and US acquisitions. The market for original programming currently associated with the BBC and the PSB-burdened commercial broadcasters would naturally gravitate toward a pay-TV model, as is the case in the US.

We therefore set out to discover what the “natural” size of both the advertising-supported and pay-TV markets would be in the UK in the absence of the BBC and PSB. One approach was to look at the US, the least regulated broadcasting environment (at least as it pertains to PSB elements). If the UK were to reach the US level of advertising expenditure and consumer spending on pay television, controlled for the differences between the two economies’ GDP, how much more or less would the total advertising and pay-TV markets in the UK be?

It seems fair to assume that the current £2bn of licence-fee revenues that the BBC currently collects would still be potentially “available” in the clean start scenario (albeit possibly delivered in a different form – ie, through advertising or subscription). The key question is whether additional competition from commercial broadcasters using the “BBC spectrum” (or any additional capacity squeezed on to the current spectrum in a “free” market) would generate more or less advertising revenue than in the status quo, and whether subscription channels would produce programming akin to the BBC’s output and thereby generate subscription revenues that might match the quantum of the licence-fee.

According to top-line calculations by Mediatique, a direct “read across” of TV Net Advertising Revenues (NAR) to GDP from the US to the UK would see a 30% uplift of UK TV NAR from £3.2bn to £4.3bn.

UK GDP 2003 (£bn)	1,099
US GDP 2003 (\$bn)	10,979
UK NAR (£bn)	3.2
Total US broadcast TV advertising (\$bn)*	42.6
UK NAR as proportion of GDP	0.29%
US NAR as proportion of GDP	0.39%
<b>UK NAR at US ratio (£bn)</b>	<b>4.3</b>
Increase in UK NAR (£bn)	1.06
* This includes ALL broadcast television advertising revenues, but excluding cable television	
Source: Mediatique Estimates, Cable TV Advertising Bureau	

**Figure 1: International comparison of TV advertising revenues as a percentage of GDP: UK and US**

Source: Mediatique

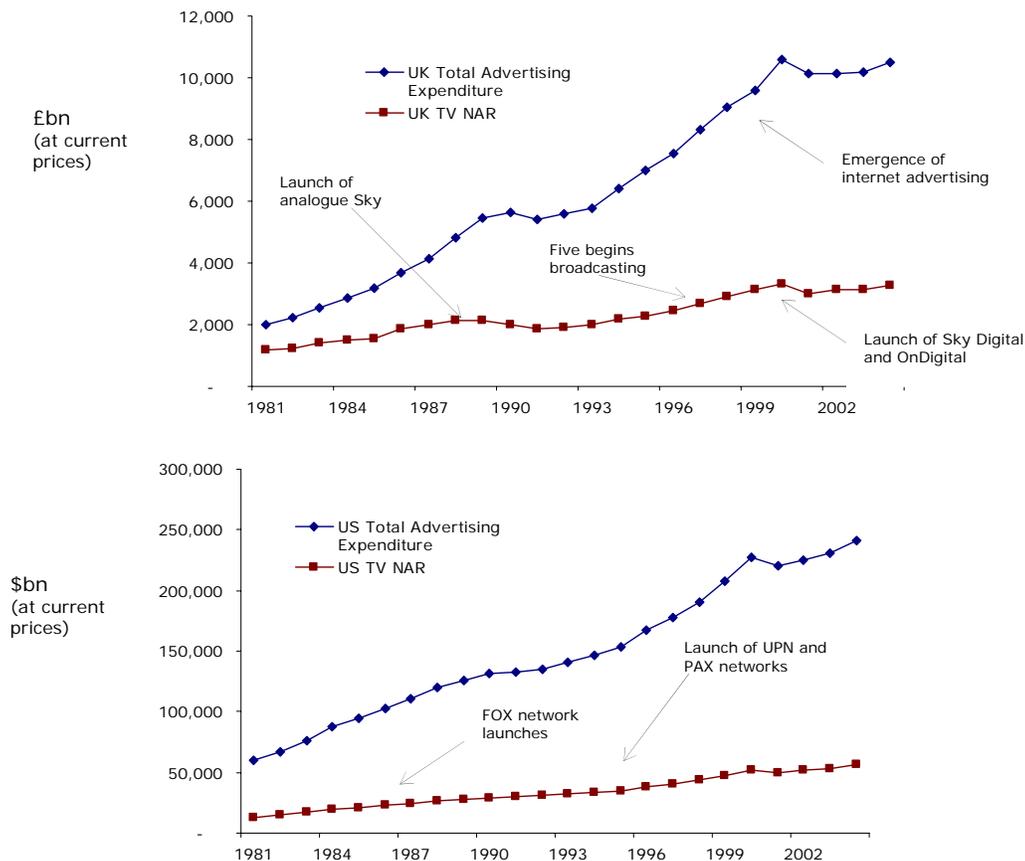
In our new landscape, is it likely that TV advertisers would commit a certain “natural” level of funding to TV, regardless of market structure? Currently, there appears to be little if any substitutability among TV and radio and newspaper advertising; however, this may be a reflection of the legacy broadcasting environment rather than an *a priori* outcome. In a fully competitive environment, the degree of substitutability may be higher. This might be compounded by the roll-out of alternative technologies (broadband, PVRs) that could further undermine viewing shares and increase advertising avoidance. Advertisers may seek other routes to market, and this could have the effect of pushing traditional NAR below its current trend line.

Moreover, in a post-digital world and in the absence of statutory PSBs in the UK, the advertising premium charged by ITV would be in competition directly with the

discounted airtime charged by satellite broadcasters. The net result would be a gradual levelling of advertising rates and therefore NAR.

Indeed, it might be that NAR would actually fall in the absence of PSBs. Should there be competition for advertising among, say, five commercial (terrestrial) broadcasters, rather than the existing three, advertising prices would most likely be pushed down. The distribution would, of course, depend on the ratings achieved by the networks. It seems clear that there would not be one channel with 50% of commercial advertising revenues, the level currently enjoyed by ITV1.

An analysis of trends in NAR in both the UK and the US reveals that advertising growth (both TV and total) follows a smooth pattern, with the absence of 'spikes' when the market suddenly expands due to new entrants (such as new networks in the US and the launch of Sky Digital in the UK). This suggests that were there to have been five commercial terrestrial broadcasters rather than three, advertising revenues would have stayed roughly as they are now, the only change being the distribution of revenues among the channels.



**Figure 2: Trends in advertising expenditure (total and television): UK and US**

Source: ZenithOptimedia, Mediatique

Even the existence of seven advertising-supported channels (i.e., two more "free" channels in addition to five in the status quo) seems unlikely to have increased the overall level of NAR as a higher number of channels would inevitably compete

against each other for audience share and push advertising prices down. As there is very little indication of substitutability across media, it is Mediatique's view that the status quo NAR represents a "natural" level of advertising, expressed in the real world through the higher premium awarded to the reduced number of commercial broadcasters. In the event of more channels and no BBC, the advertising budgets would be spread across a greater number of channels, at reduced premium levels for each channel. In other words, the advertising market has generated its "natural" level across a limited number of channels, and an increase in channels would merely see a re-distribution of advertising expenditure.

ITV currently over-delivers programming to its core demographic markets, and in a similar way, all the major US networks aim the vast majority of their programming at the 18-49 demographic. Is there sufficient un-met demand for programming from outside the centre-ground to drive niche advertising above its current level in the UK? The positioning of major new channels such as Five in the UK and Fox in the US suggests that mainstream channels will continue to aim their programming at the 18-49 group. The demand elasticities amongst the centre-ground of viewers are higher than those outside – hence, in a fully competitive world, broadcasters are likely to face intense price competition for the delivery of these targeted viewers and it appears likely that advertising revenues per mainstream broadcaster would face downward pressure, although total NAR may remain constant in the aggregate. However, there may be scope for programming aimed at other demographics to be delivered on subscription channels.

We analysed the pay-TV market in similar fashion, based on a "read across" from the US market. Using 2003 as our base year, we calculated that US expenditure on pay television subscription services (\$42.6bn) represented 0.39% of the US GDP. This compares to 0.31% in the UK, for a total expenditure of £3.4bn. If we assume that consumers would spend, on a pro-rata basis, as much in the UK as in the US in the absence of PSB, the UK market would be worth another £860m annually.

UK Subscription revenues (£bn)	3.4	
US Subscription revenues (\$bn)	42.6	
Cable subscription (\$bn) *	29.5	
DBS subscription (\$bn) **	13.1	
<b>UK GDP 2003 (£bn)</b>	<b>1,099</b>	
<b>US GDP 2003 (\$bn)</b>	<b>10,979</b>	
UK proportion (of GDP)	0.31%	
US proportion (of GDP)	0.39%	
UK revenues at US ratio (£bn)	4.26	
Increase in UK revenues (£bn)	0.86	
<b>Pay-TV homes ***</b>		
UK Pay-TV homes (m)	10	Source: Mediatique
US Pay-TV homes (m)	90	Source: FCC
UK revenue per pay-TV home (\$)	605 per year	
US revenue per pay-TV home (\$)	474 per year	
<i>Source: Mediatique Industry Model, PwC Media Outlook, Company Annual Reports (10-K)</i>		
Figures refer to year ended 2003		
* Cable subscription revenues include digital and analogue		
** Split of DBS revenues as follows (\$bn):		
Echostar	5.40	13.09
DirecTV	7.70	
*** Total TV households are:		
UK - 25m	40%	} Pay-TV penetration rate
US - 107m	84%	

**Figure 3: Projected subscription revenue per household and pay-TV penetration in the UK**

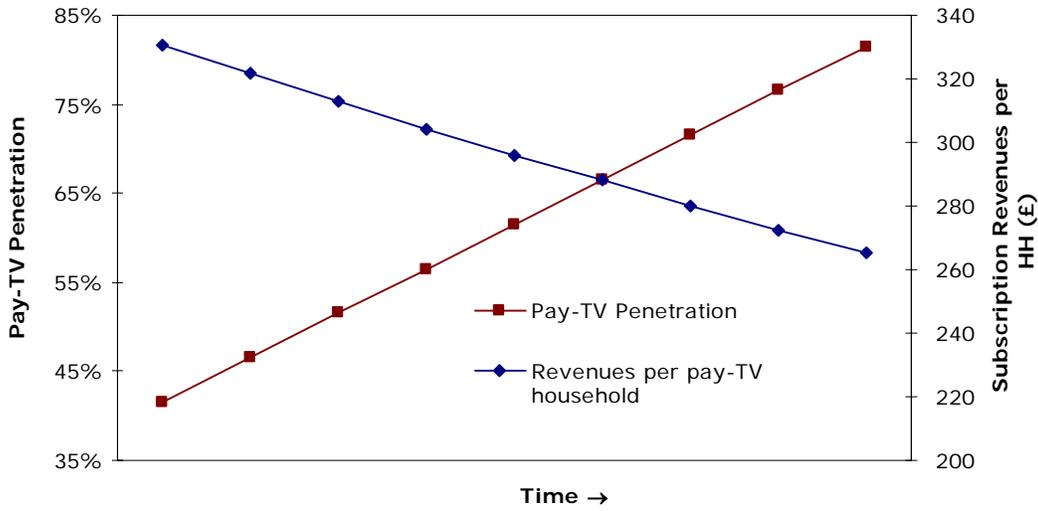
Source: Mediatique

We then considered whether the marketplace in the UK, in the absence of PSB, would support a home-grown HBO-style service. Many commentators have argued that, in the absence of the BBC and PSB obligations generally, a channel dedicated to original programming (drama and comedy) and films would have been more likely to launch in the UK, and this would have allowed the market to deliver programming that consumers currently enjoy on the BBC and through PSB obligations on commercial broadcasters. Keeping in mind the "size of market" analysis above, we considered the prospects for such a channel in a non-PSB environment in the UK, and, in particular, how much such a channel could afford to spend on programming.

A "read across" from the HBO experience in the US is instructive with regard to the potential size of a UK HBO (which we will call 'HBO Lite'). HBO's two services, HBO and Cinemax, are distributed to 39m homes, out of a total of 107m TV homes in the US. Of these, Mediatique assumes that HBO alone is in 27m, representing a penetration rate of 25%.<sup>1</sup> If we take into account the 84% multi-channel penetration rate in the US overall, HBO is in 30% of all multi-channel homes in the US. We then assume that, in the absence of PSB, pay-TV penetration in the UK would have been higher than it is in the real world by this point in time, and have therefore determined a penetration rate of 55%.

<sup>1</sup> The break-down is not provided by HBO itself and the estimate is that of Mediatique. Note that in the BBC's Charter Review document, *Building Public Value: Renewing the BBC For a Digital World*, (pp. 115-16) it is suggested that HBO has a penetration rate of just 10%, which we believe materially underestimates the figure. We do not disagree, however, with the BBC's conclusions in this regard.

Our 55% penetration figure was derived from a simple “read across” from the US. We looked at the current Average Revenue per Unit (ARPU) and penetration rates in the US, and “worked backwards” to suggest what these ratios would look like in the UK. For example, the ARPU in the US is currently £258 on a penetration rate of 84%. The equivalent figures for the UK are ARPU of £336 and penetration of 40%. If, as we believe, ARPU will go down as penetration rises (since late-adopting homes are assumed to spend less on pay-TV), we have plotted a straight line progression between the UK and the US ratios. The chart below shows the total subscription revenue at each 5 percentage point increase in pay-TV penetration in the UK on the basis of the US ARPU to penetration ratio.



**Figure 4: Projected subscription revenue per household and pay-TV penetration in the UK**

Source: Mediatique

Note: We assume a linear convergence to the US model over time, although in reality the penetration of pay-TV is subject to diminishing marginal returns as the final households to switch to pay-TV are often the most difficult to convert. In any event this linear relationship does not represent the normal lumpiness of pay-TV subscriber growth which varies seasonally and over time.

We calculated that, if the UK were to get to the US level of 84% pay-TV penetration, and ARPU of £258, pay-TV would generate £5.85bn in revenues – i.e., far higher than would be the case when differences in GDP are accounted for. As a result, we have plotted the point along our linear progression where the total revenues raised through pay-TV are £4.26bn, being the GDP weighted equivalent of the US market. This point generates an ARPU in the UK of £305, on penetration of 55% (2003 period).

In other words, in the context of clean-start and in the absence of the BBC and PSB, it is likely that pay-TV penetration would be higher by now than in the status quo. This is largely because there would be no publicly funded broadcaster producing original and PSB programming but that the licence-fee funding would logically be “available” to be spent on pay-TV channels delivering this genre of programming.

The status-quo market in the UK includes circa £2bn of revenue for BBC Television arising from the licence-fee. If this is added to total APRU, the UK is, in fact, spending more than a “read across” from the US market would suggest. However, in the absence of the BBC, and using US subscription revenue/GDP as a guide, £860m of circa £2bn would be generated “naturally” by the market. Would

the gap of £1.1bn be delivered by the marketplace in a “clean start” scenario? We consider this possibility in our “out-performance” scenarios below.

Returning to HBO, we assume that all platforms, including digital terrestrial, would be capable of delivering pay-TV services. Based on our take-up assumptions for pay TV generally, this suggests that 4m homes would subscribe to HBO Lite in the UK.

We then looked at the likely revenues generated by our 4m HBO Lite homes in the UK, and the implied programming budget such a channel might justify.

HBO in the US had revenues of \$3.1bn last year, of which Mediatique assumes 70% was derived from the HBO channel itself. At an implied per-month household contribution of \$6.70, this generates about \$80 in revenue per HBO household, and \$25 of EBITDA.<sup>2</sup> We then calculated the programming budget per household (\$28) and the original programming budget per household (\$15).<sup>3</sup> If we translate into pounds, and multiply these per-household ratios against the implied penetration of HBO Lite in the UK, the total programming budget would be £61m, of which £32m would be spent on original programming.

HBO Subs (HH, m)	27.0	<b>HBO Lite "Read Across"</b>		
Penetration Rate	30%			
		HBO Lite Subs (HH, m)	4.0	
Total HBO Revenue (\$m)	2,170		<b>\$m</b>	<b>£m</b>
Revenue per Subs (\$) (annualised)	80			
Revenue per Subs (\$) (monthly)	6.7	Revenue	323	174
EBITDA margin	31%	EBITDA	100	54
EBITDA per Subs (\$) (annualised)	25			
Total Programming Budget (\$m)	760	Programming Budget	113	61
Total Budget per Subs (\$)	28	Original Programming Budget	59	32
% of Budget on Original Programming	53%			

**Figure 5: Subscription TV in the UK: HBO “read across”**

Source: Mediatique, Deutsche Bank

Notes:

Penetration rate is calculated with reference to multichannel homes. HBO Lite subscriber base is calculated on a 30% penetration rate of UK pay-TV homes. We assume that 55% of UK homes have pay-TV, and assume that all platforms, including digital terrestrial, are able to offer pay-TV services.

We assume identical revenue per subscriber, expenditure per subscriber and EBITDA margin for the UK.

This analysis suggests that HBO Lite would have a programming budget 50% greater than E4’s but 30% less than BBC3’s. We compare the programming budgets of major broadcasters in the chart below. Note that on current per-subscriber rates paid to E4, and its advertising revenues, the channel now operates in profit. It should also be noted that E4 is in fact a basic pay-TV channel, rather than an a la carte channel like HBO, and its subscription revenues are guaranteed under carriage agreements with distributors.

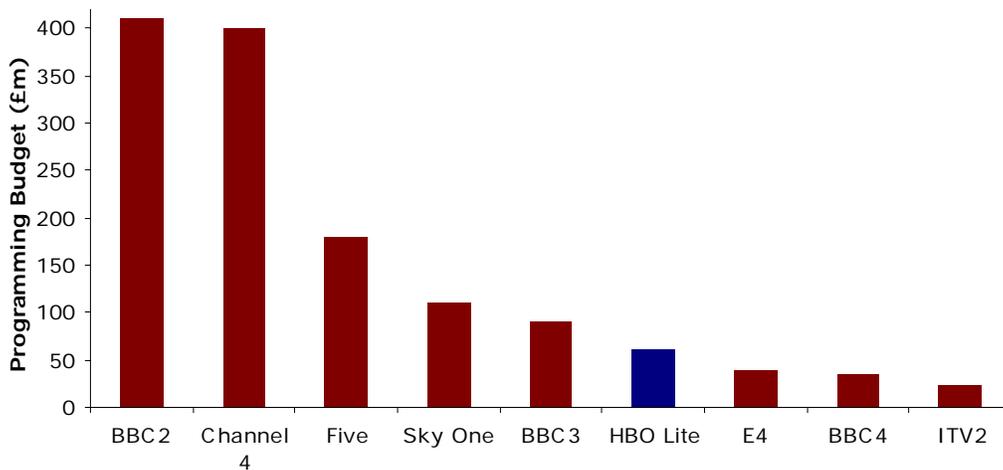
Our HBO Lite proposition would generate EBITDA of £54m on a “read across” from the US experience. Note, however, that HBO has significant movie and sports programming, and an HBO Lite, on this reading, would not be able to afford a significant amount of premium programming. Attempts to buy at least

<sup>2</sup> These numbers include all revenues (including subscription and programme sales). HBO Lite, logically, would follow the same business model.

<sup>3</sup> Source: Mediatique estimates and Deutsche Bank.

some such programming might tend to depress operating profit margins. More generally, it is important to recognise that costs for high-quality programmes do not vary significantly from market to market (aside from talent costs, which are higher in the US), and the £32m of expenditure on original programming would only cover a limited number of hours. Following the HBO example, the programming mix on HBO Lite would include high-quality drama and comedy, some “movie of the week” films and other high-end fare.

It is worth considering whether an HBO Lite, in the absence of competition from the likes of Showtime and other US multi-channel operators, would actually generate more than the US “read-across” share of total pay-TV revenues. However, this must remain a subjective consideration. The chart below provides a comparison of programming budgets at existing mainstream UK channels and the putative HBO Lite. To make the comparisons clearer, we have not included the two high-budget mass market channels BBC1 and ITV1.

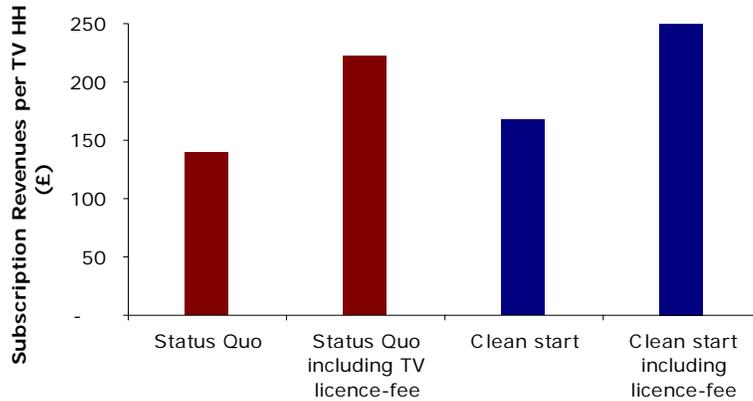


**Figure 6: Programming budgets in the UK, split by channel**

*Source: Mediatique, Company accounts*

*Figures in the above table refer to total programming budgets and do not account for variations in expenditure between original and acquired programming across channels*

We have also looked at potential “out-performance” scenarios for HBO Lite, by reference to the availability of the funds currently generated by the BBC licence-fee. Recall that, on a straight “read across” from the US market, controlled for relative GDP, we calculate that pay-TV revenues in the UK would have to be £860m higher in the UK to match the US experience. However, if we include the BBC licence-fee in our ARPU calculations for the UK market, UK consumers actually spend £1.14bn more than the straight “read across” from the US experience would suggest. Is it sensible to assume that at least some of this additional spending (which is generated by an enforced universal licence-fee) would voluntarily be spent on pay television subscription? As a control, we have assumed that the UK market, in the absence of PSB requirements, actually generates as much ARPU as is currently the case (including the TV portion of the licence-fee), but spread across the higher penetration of pay-TV homes assumed in the clean-start environment. On this basis, we can re-state the figures as follows:



**Figure 7: UK subscription revenues: licence-fee considerations**

Source: Mediatique

We then apply HBO's share of the total US pay-TV market (5%), and upgrade HBO Lite's revenues and programme expenditure accordingly. This adds a further £20m to HBO Lite's programming budget, taking it to £80m. This is still below the budget of BBC3, but double that of E4.

<b>UK Subscription Revenues (£m)</b>	3,400
Change in Revenue required to match US GDP ratio (£m)	860
<b>Including TV licence fee (£m)</b>	5,400
Change in Revenue required to match US GDP ratio (£m)	(1,138)
HBO's share of US Pay-TV Revenue	5%
HBO Lite's Share of Additional Revenue (£m)	58.0
Implied Uplift in Programming Budget (£m)	20.3

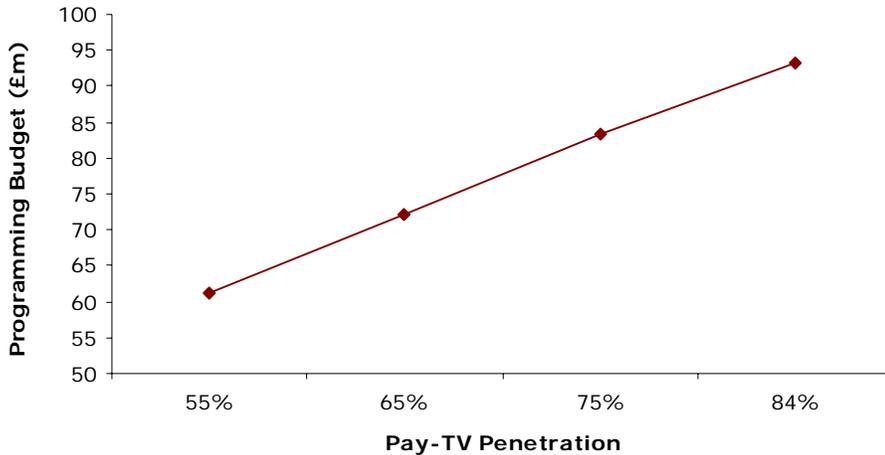
**Figure 8: Potential uplift in HBO Lite programming budget**

Source: Mediatique

We assume that £2bn of the BBC licence-fee is currently spent on television. We also assume that HBO spends 35% of its revenues on its programming budget and apply this figure to gain our implied uplift for HBO Lite.

On an even more optimistic iteration of the model, taking UK pay-TV penetration rates to the US level of 84%, HBO Lite would have 6.1m subscribing homes, yielding a programming budget of £93m. This set of assumptions still does not generate a programming budget of any great size relative to other channels in the status-quo UK landscape. Indeed, this scenario takes HBO Lite's programming expenditure to just above BBC3's, but still well below that of Sky One and half that of Five.

We set out the forecast relationship between HBO Lite's programming budget and pay-TV penetration levels below.



**Figure 9: Forecast programming budget of HBO Lite**

*Source: Mediatique*

*HBO Lite's programming budget is based on a 30% take-up of HBO Lite in pay-TV homes. For simplicity, we assume that the relationship between HBO Lite subscription numbers and pay-TV penetration is linear, whereas, in reality, such a relationship may vary over time.*

Finally, one could then generate a “best case” out-performance by reference both to the higher penetration rate and to the £1.14bn of “over spend” described above, apportioning a “read-across” 5% of the increase to HBO Lite. On the base-case margins, this would provide a total programming budget of £113m. This is an extremely optimistic set of assumptions, and underpins how difficult it is to posit a viable US-sized HBO in the UK market.

We conclude, therefore, that, on a straight “read across” from the US, and controlling for GDP, a US-sized HBO would not be sustainable in the UK. Indeed, even on the most optimistic runs of our model, the programming budget would be £113m, less even than the current budget of Sky One.