

## **Impact Assessment of CMA's Options for Increasing On-Rail Competition: David Starkie, Case Associates**

Evidence of the effects of competition in Chapter 5 of the Impact Assessment is compelling, although it is to be regretted that again no reference is made to the competition analysis undertaken by NERA during the early days of rail privatisation, a time when there was a high degree of franchise overlap. Although this research is now dated, I feel it still has relevance to the current CMA investigation and its absence from inclusion in Chapter 5 is unfortunate.

I would like to have seen in the Impact Assessment more evidence on how competition varies with firm concentration. The point was made that the relationship is not linear but I feel that a more systematic review of the evidence is required, particularly in view of the focus on dividing a franchise between only two bidders in Option 2. In this Option, the focus on two operators only is linked to rather demanding assumptions on how they will interact. My view is that there is a high risk of tacit collusion; that they will simply accommodate each other. Therefore, it would have been useful to consider the possible impacts and operational issues that arise from further division of a franchise.

With Option 3 modelling, I would make a similar point: it focuses on the overlap of two franchises only (see basic modelling assumption at the top of page 81). But one could envisage a scenario where over time, as franchises come up for renewal, more overlaps could be designed. Thus, a single franchise might be faced with overlaps from several contiguous franchises around its geographical perimeter. (This would replicate the competitive landscape that pertains in the UK airport industry where there are many cases of airports being within 1 to 1.5 hours' drive of each other and have overlapping catchment areas with several airports). With such a scenario the competitive gains could be quite large. In this context, the NERA study referred to above analysed a number of examples where three train companies overlapped with Herfindahls' between 0.35 and 0.77. (Herfindahls' for two overlaps varied between 0.50 and 0.79).

The attempts in the Impact Assessment to model competitive outcomes I did not find totally convincing, partly because it is arguable whether one can appropriately anticipate such outcomes. I would note the Airports Commission (with which I was associated) found equal difficulty in anticipating how the airline industry would react once additional runway capacity allowed for more competition at Heathrow or Gatwick.

In the Impact Assessment emphasis is placed on price competition and measures of the consumer benefits likely to arise from such competition. However, I can foresee circumstances in which these benefits are nullified by marked changes in input costs.

This could occur if the introduction of on-rail competition occurs quickly and on a large enough scale that entrants' bid up the price of skilled labour resulting in a significant increase in factor rents. (For an example of this occurring in a transport industry following major disruption in labour markets, see 'Investment and Growth: The Impact of Britain's Post-War Trunk Roads Programme', *Economic Affairs*, 35.1, 2015). It is probable that this eventuality is more likely to occur in Option 1 (and possibly 4). The re-franchising timetable makes this less likely to occur in Options 2/3.

I would have liked to have seen more coverage of those competitive dynamics which bear upon the timing of services; the better alignment of service timings with consumer preferences could provide important consumer benefits. I am mindful here of the Department's micro-management of existing timetables as part of the franchise system. It is for this reason that in my previous submission, (in response to the CMA's July 2015 Discussion Paper), I drew attention to the ideas contained in the *Fiscal Studies* paper, 'Train Service Co-ordination in a Competitive Market' (1993, 14,2 53-64). Taking Option 2 by way of example, the suggestion in the *Fiscal Studies* paper is that the initial timetables launching franchises, are allowed to evolve at the operators' discretion but subject to certain rules (for example to prevent head to head running). I note that there is again no reference to this paper which, although written a long time ago, covers the same general issues addressed by the CMA Study.

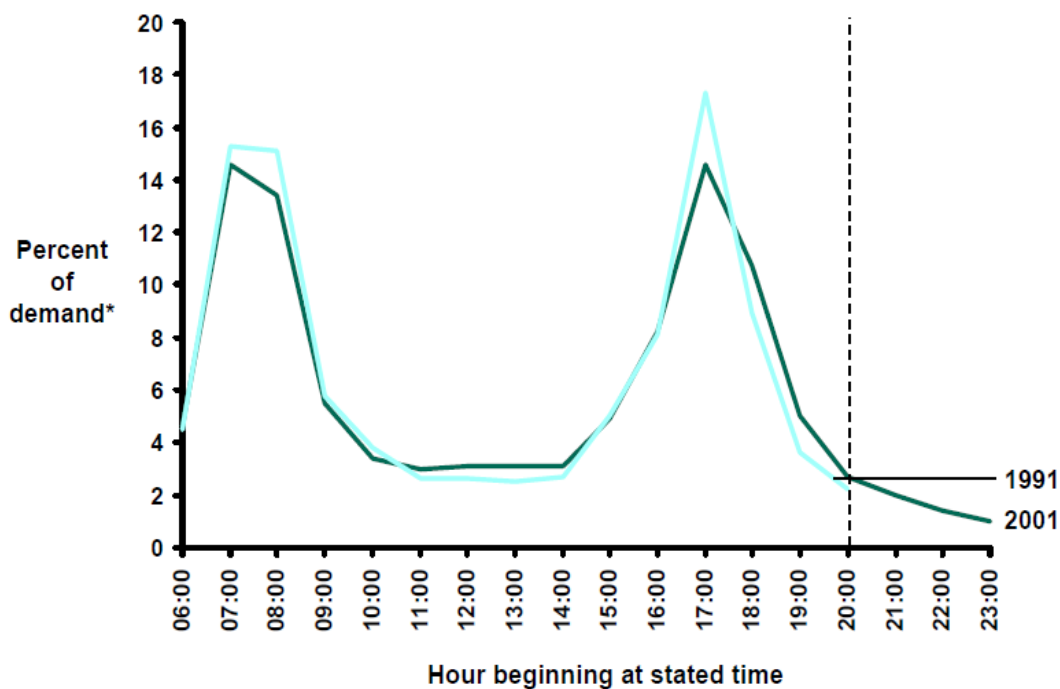
Emphasis is placed on competition driving innovation leading to a better alignment of the quality offerings with consumer preferences. In so far as competition stimulates different on-board product offerings I foresee further problems of Department intervention. The Department seems particularly sensitive to any proposal to extend the number of ticket classes beyond First and Standard. It did not react favourably to recent reports that a franchise bidder was proposing to offer a three class service by introducing the equivalent of Premium Economy. And it reacted adversely when the press reported on my idea of introducing a lower quality product (Economy Class) to supplement First and Standard on commuter trains at a discounted fare. (Please see attachment extracted from Transport Infrastructure: Adding Value, IEA Discussion Paper #50). If train company product offerings were to be constrained by the Department acting as adjudicator, this would limit, possibly significantly, the service quality benefits to derived from competition.

#### Rail congestion and investment

The railways are a good example of where the price/investment/quality nexus is mute. An aspect of rail concentrating minds at the current time is how to increase

network capacity, especially into London.<sup>1</sup> London dominates UK rail travel with three-quarters of all the country's rail journeys starting or ending there. Pressures on available capacity on lines into London are especially severe during the peak which is of limited duration (see Figure 5).

**Figure 5: Distribution of London and South East demand for rail across the day**



To the economist the obvious remedy is to introduce marginal cost based pricing so that fares reflect the high costs of providing peak capacity thus leading to an attenuation of peak demands. But, as with roads, political constraints preclude any serious move towards the adoption of such a policy. Instead, a programme of, largely geographically-based, Route Utilisation Studies (and Strategies) (RUSs) has been attempting to address the peak period capacity shortfall.<sup>2</sup> The result is an expensive programme of works, which focuses on squeezing in more train paths and lengthening trains, basically to form 10- and 12-car formations on suburban lines. This seemingly simple investment 'solution' does however have other implications; many station platforms need to be lengthened, generally through-out the route, (sometimes with re-positioned signalling), the power supply for electric traction needs to be upgraded and depots re-jigged or rebuilt to accommodate additional

<sup>1</sup> High Speed 2 is part of the broader strategy for increasing rail commuter capacity into London.

<sup>2</sup> As London First has pointed out in its recent submission to the Transport Select Committee inquiry, *Reform of the Railways*, data on overcrowding is not systematically collected but available data suggests that half of rail passengers travelling to London in the rush-hour do so in conditions that are classed as overcrowded, although the definition of over-crowded is somewhat arbitrary. See: [http://www.londonfirst.co.uk/documents/Transport\\_Committee\\_Inquiry\\_-\\_Reform\\_of\\_the\\_Railways\\_London\\_First\\_submission\\_\(18\\_April\\_2012\).pdf](http://www.londonfirst.co.uk/documents/Transport_Committee_Inquiry_-_Reform_of_the_Railways_London_First_submission_(18_April_2012).pdf)

rolling stock. And then, of course, there are major reconstructions of bottlenecks at approaches to London termini, of which the complicated track widening at London Bridge is a good example.

The cost of this programme is difficult to determine. Data on investment costs is at a disaggregated level and it would need much analysis to come up with a definite amount although a sum well in excess of £1 billion is involved.<sup>3</sup> But, is such investment expenditure really needed in the short and medium term when the problem can be approached in a rather different and less expensive manner using market segmentation? More than a decade ago Peter Kain and I suggested an approach to this congestion problem that exemplifies the argument that first one should study the heterogeneity of travel preferences and then offer a choice of quality/price options reflecting those preferences (Kain and Starkie, 1998).

The idea is to introduce more quality/price trade-offs for the rail commuter by introducing an additional high-density section to commuter trains, let us say of three carriages, access to which would be priced during the peak at a *discount* to current fares of, let us say, 20 percent, (perhaps less of a discount for shorter distances but more for longer commutes). The interior layout of the high-density section of the train could be modelled on that of the new rolling stock (see Figure 6) used for the London Overground service (although the lateral seating would be replaced by flip seats)<sup>4</sup>, and is probably best located at the front end of the train.<sup>5</sup>

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<sup>3</sup> This figure is based on analysis of some of the RUSs by the RAC Foundation. See Dodgson (2009).

<sup>4</sup> The flip seats would be available during the off-peak. During the peak they could be locked-out, possibly using a magnetic lock device controlled by the driver/guard.

<sup>5</sup> This rolling stock, Class 378, is based on the Electrostar family of trains, used extensively on Kent services. A new carriage costs about £1 million.

**Figure 6: The interior of Class 378 rolling-stock**



It is currently the norm for the front carriages of a peak hour train as it approaches its final stop, to have many standing as well as seated passengers, sometimes in spite of the rear carriages having seats to spare (even though the train might be classed as overcrowded on the basis of passenger/available seat criterion). This is because of an incentive for some passengers to get through the ticket barrier first; it does illustrate the willingness of some to sacrifice comfort for ease of exit on arrival. One can also observe that the pattern of loading on peak period trains evolves as they progress towards London and that, as one might expect, standing at the front of the train generally occurs from stops closer to London, so that standing time in such cases is relatively short. Consequently, on the longer distance commuter trains - those starting from the Sussex and Kent coasts for example - we would expect the proposed high-density lower-fare carriages to be less used, although even at these longer distances some might choose to trade-off the discomfort for a cheaper fare; the opportunity to do so would at least exist. The loading pattern could be expected to change at intermediate stops closer to London, especially at places like Bromley South, Croydon, Watford and Woking with proportionately more of the commuters choosing the high density section. Middle distance or outer suburban services, for example trains starting at places like

Gillingham and Dartford, might be expected to have the high-density coaches well used from the start of the journey.

So, what are the gains compared with the existing proposal to lengthen trains? From the resource cost point of view, there would be more passengers on a standard-length train without the recourse to high levels of investment in additional rolling stock, station lengthening etc., although there would be some costs involved in modifying existing rolling-stock. There might be some savings in traction costs. Stripped of seat furniture train carriages would be lighter. Although there could be more passengers per train during the peaks, adding to the weight and offsetting the absence of seat furniture, this would be for a relatively short period of the day. It is also probable that boarding/alighting times would be cut (substantially) so that it might be possible to speed-up services and/or add to their resilience and thus service reliability. In the shorter term until traffic expands further, it might be possible to remove one or two trains from the crowded timetable also adding resilience and increasing punctuality, although if this were done there would be the disbenefits to the passenger of a slightly reduced frequency.

From the consumer surplus viewpoint there would be an increase in benefits to passengers because the introduction of an additional level of service would lead to the better matching of preferences, not only for those choosing the new (economy) class but also for those seated passengers who will enjoy higher service quality not having to share their space with standing passengers. It might also be possible on the longer distance services to have the trolley catering service in standard class during peak times; at the moment these are restricted to the off-peak. The new choice package might itself generate new traffic (and thus consumer benefits) or divert existing users of car and commuter coach, the latter mode being important for those currently commuting from north Kent for example (in which case there would be a small loss of producer and consumer surplus if coach frequencies are trimmed). There are also some potential gains in the off-peak because disabled passengers and cyclists will be more easily accommodated in coaches with uninterrupted floor space.

From a cash-flow/revenue standpoint, in spite of the discounted ticket price for use of high density carriages during the peak, the revenue effect could be limited: slightly negative or even neutral. There might be some revenue dilution as a result of first class passengers diverting to what would now be a more pleasant standard class but, on the other hand, the traffic generative effect of more rail travel options will bring-in more revenues. And one might expect better revenue protection because the guard/conductor would be able to move more freely through the seated passenger areas; discount passengers holding the cheapest tickets would be self-

regulating in-so-far as they had a ticket at all, but the latter issue, of ticket avoidance, arises in any case in existing crowded conditions affecting *all* sections of the train<sup>6</sup>.

The forgoing is, of course, based partly on conjecture without access to data: on overcrowding patterns, investment costs and much else, but the speculation does seem to accord with observed commuter behaviour.<sup>7</sup> The next steps would be to obtain more transparency on the costs of the existing process of lengthening platforms etc. and on train loading patterns, to be followed by a formal analysis comparing the two approaches importantly supported by experimentation on one of the commuter lines.<sup>8</sup> There would be a particular requirement to examine the extent of the 'economy class' price differential needed in order to manage and balance demand across the different train sections (that is, to obtain more information on the cross-elasticities with respect to comfort) but discussion with commuters from the Medway Towns in Kent suggests that my starting assumption of a 20 per cent discount on the standard class fare looks reasonable<sup>9</sup>. A discount of this amount would place the price of 'economy class' about mid-way between the standard class rail fare and the fare for commuter coaches.

What would be inexcusable would be for *some* elements of the approach to occur by default if planned infrastructure spending did not materialise; for quality to be degraded generally so that standard class passengers are faced with a still uniform but an even lower quality of service at the standard price. There has been a tendency for this to happen since the 'economy-class' idea was first put forward more than a decade ago. For example, in standard class, one can pay for a particular journey exactly the same fare for five-across as opposed to four-across seating (with the different seat configurations sometimes to be found on the same train).

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<sup>6</sup> Bear in mind that the discount will apply only in peak periods. With, say, three economy class carriages, much less than half the train load would be on discounted tickets and with a discounted price of, say, 20 per cent, compared with the current situation, the gross revenue loss per train would be less than 10 per cent. Gains from generated traffic or better revenue protection might offset much of this loss.

<sup>7</sup> Note also that it can be trains immediately outside the peak that are the most crowded as passengers seek cheaper off-peak fares at the expense of a higher probability of standing. This behaviour is particularly noticeable on long distance trains out of King's Cross and Euston after the evening peak-fare restriction.

<sup>8</sup> The Dartford - Charing Cross service might be a suitable candidate. It was subject to an experiment with quasi-double-decked carriages from 1949 until 1971. It was found that station dwell times were much increased because of the difficulties of boarding and alighting. See: [http://www.bulleidlocos.org.uk/\(S\(150q2a3pumudrtcaeuwml1\)\)/\\_oth/4\\_dd.aspx](http://www.bulleidlocos.org.uk/(S(150q2a3pumudrtcaeuwml1))/_oth/4_dd.aspx)

<sup>9</sup> A point made by one commuter was that the potential saving in infrastructure investment from having economy class would give him some confidence that commuter fares would increase more slowly than they would otherwise do.