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The Croydon Tramlink Impact Study

Mary Thomas, Regional Director, Head of Market Research, FaberMaunsell
and Neil Georgeson, Transport for London

University College London
22nd January 2003

This well-attended meeting heard a comprehensive presentation on impacts of ridership and modal choice of the Croydon Tramlink network, which opened in May 2000. It comprises some 28 km, with their main branches from Croydon town centre. That north-west to Wimbledon is largely a former BR route, on which a greatly improved frequency is now offered. To the east, a route on roads and new reserved track alignment runs to the large housing area of New Addington. North-eastward there is a route to Elmers End, with a branch to Beckenham, running partly on former BR track, or alongside an existing rail route. In Croydon town centre, there is a one-way loop served by all routes. (See Figure 1 for location of Croydon Tramlink.)

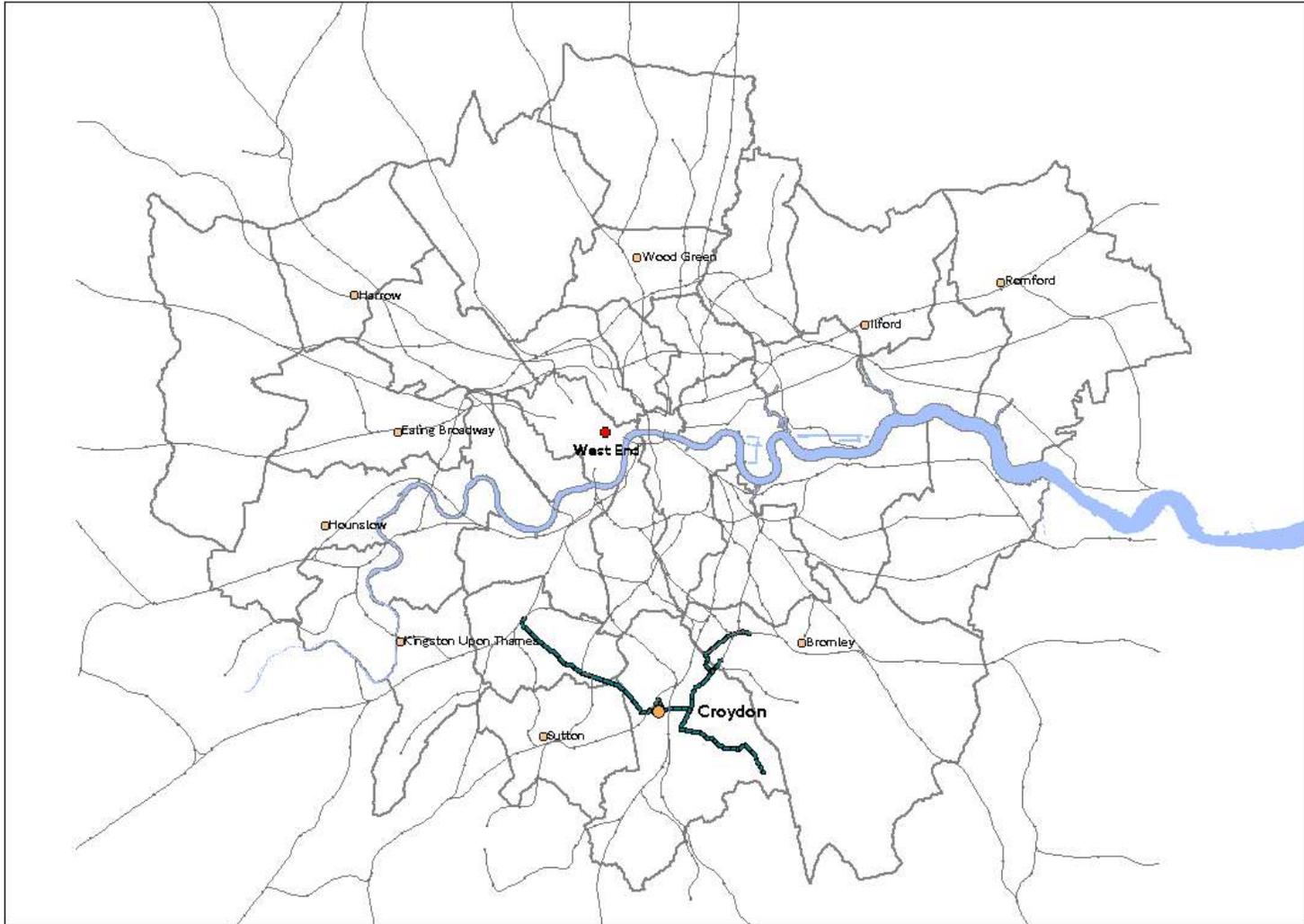
Extensive ‘before’ data was collected in late 1999 and early 2000, with a follow-up study in late 2000 and early 2001. As far as possible the same ‘agents of change’ and households were interviewed, providing a panel of respondents. Ridership data was also collected for bus and rail services affected, together with data on traffic flows and car park usage.

Fuller details of the data and its analysis may be found in their paper (jointly written with Geoff Copley of FaberMaunsell) at the Association for European Transport conference in Cambridge in September 2002.

Overall ridership

In the 12 months October 2000 - September 2001, some 17.13 million passengers were carried, and the latest annual equivalent is around 18.8m, an encouraging figure. In each of the busiest hours (0800-0900 and 1700-1800) about 6,000 passengers board the network. The busiest stop on the system is East Croydon (6m annual boarding and alighting passengers). By time of day, Monday-Friday shows the typical peaks in the hours beginning 0800 and 1700. Saturday travel is similar to weekdays in the middle of the day and evenings, Sunday somewhat lower. The degree of ‘peaking’ is less than on national rail services in the area, but higher than bus.

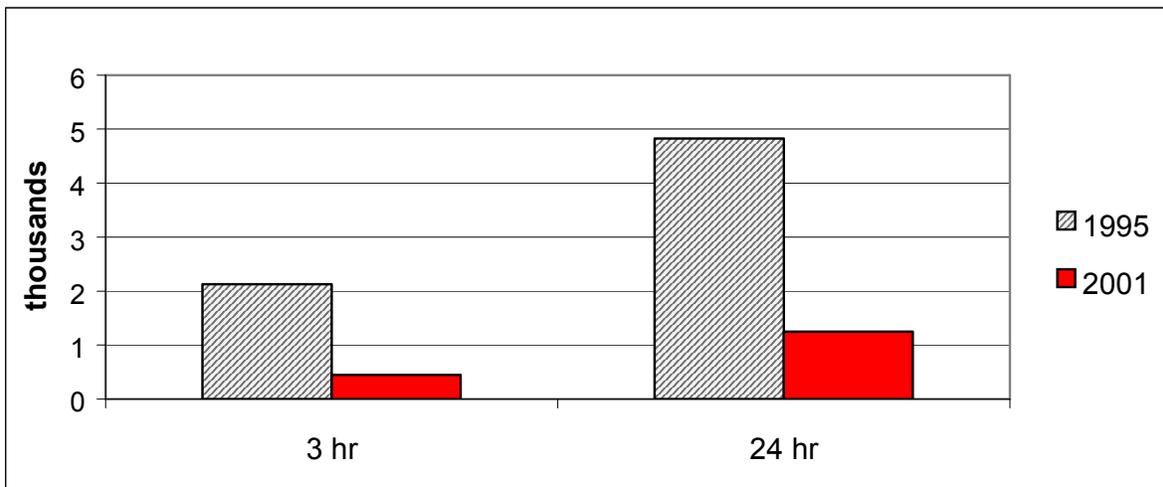
Figure1: Location of Croydon Tramlink in London



The most dramatic growth in ridership has been on the Wimbledon line, where demand is about eight times that of the former BR route, and six times that at stations previously served by it (some additional intermediate stations were created when Tramlink opened). This compares with an overall growth of 13% over the same period (1994-2001) on national rail services in central London. Ten-minute peak headway is offered in place of a 45 minute one. The wider range of destinations (by through service, and interchange at Croydon) is another major factor.

In terms of accessibility, measured by travel time, the largest user gains were from New Addington, comparing bus with tram.

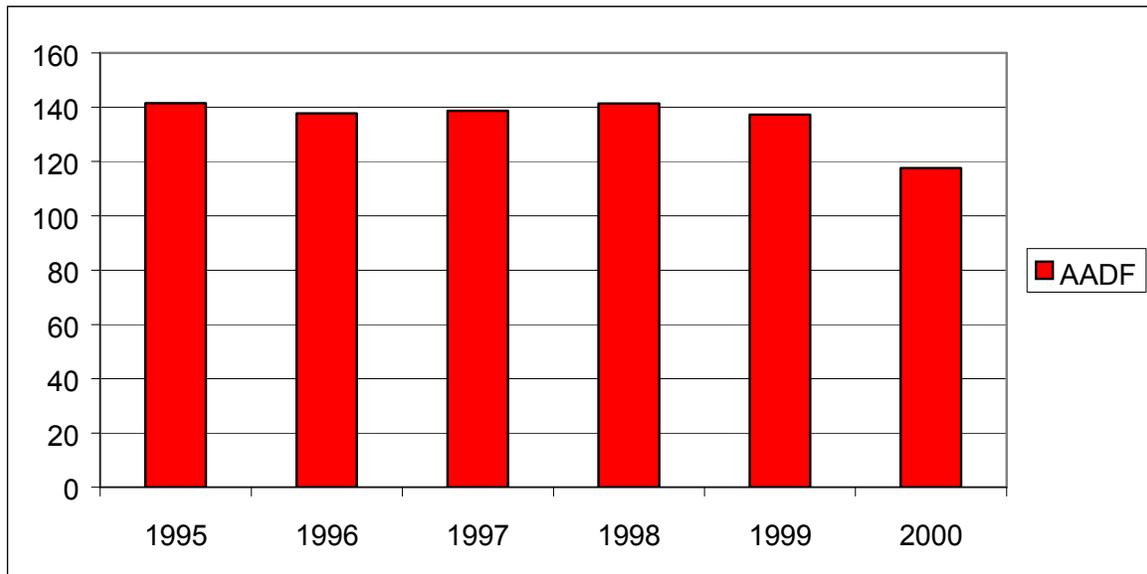
Figure 2: Bus passengers between New Addington and central Croydon



Inbound and outbound bus use for central Croydon fell by 11% and 2% respectively in the am peak between 1995 and 2001. Larger falls in bus patronage were experienced on routes between New Addington and central London between 1995 and 2001. Usage fell by 79% on routes into New Addington and by 65% on routes to central Croydon. Feeders to Tramlink replaced many of the through-bus services, although some through services do remain. It should be borne in mind that on the bus network as a whole passengers rose by nearly 20% between 1995 and 2001, leading to a bigger relative shift than appears at first sight.

Parking activity at Croydon Council off-street car parks in the central area fell by 6% in the 12 months after Tramlink opening, although some decline had already been observed prior to this, and the extent to which it is attributable to Tramlink is not wholly clear. Highway flow data showed some ambiguities, but after removing data from a 'rogue site' a drop of about 4% was shown between 1999 and 2000 (see Figure 3), consistent with the drop in car park entries.

Figure 3: Traffic flows across Central Croydon cordon



Modal shift

The household survey indicated that, of those making the same journeys before and after Tramlink opened, 69% were former bus users, 16% car drivers, 3% car passengers, 7% national rail, 4% walk and 1% 'other', grossing up to about 13.5m passengers per year.

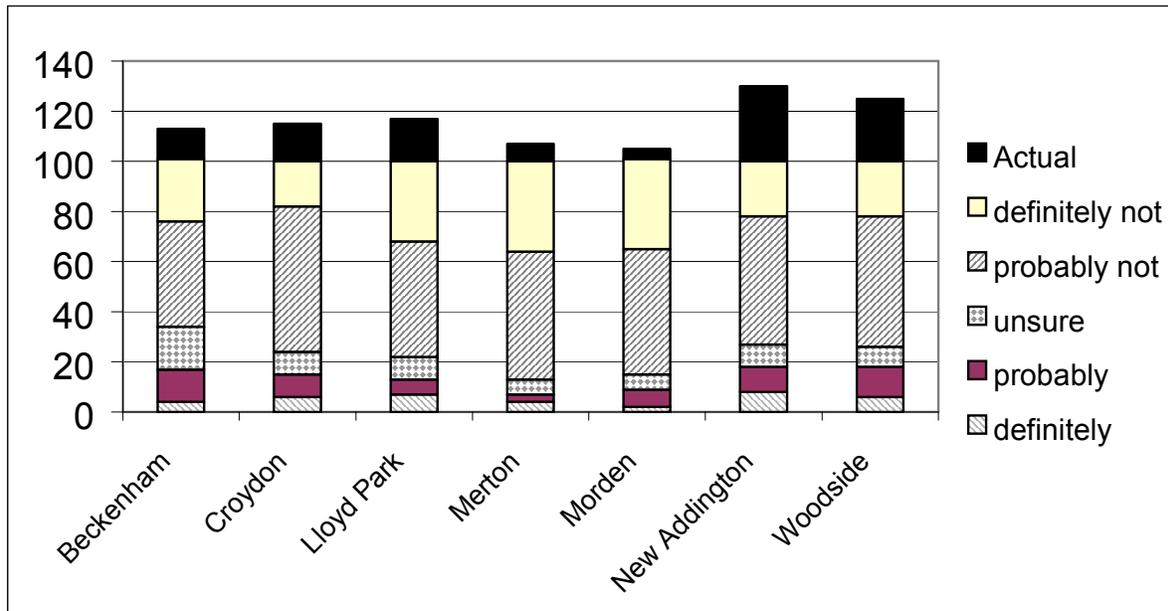
Modes of egress from tram stops comprised:

67%	walk
15%	bus
12%	rail
6%	car

Access mode composition was similar.

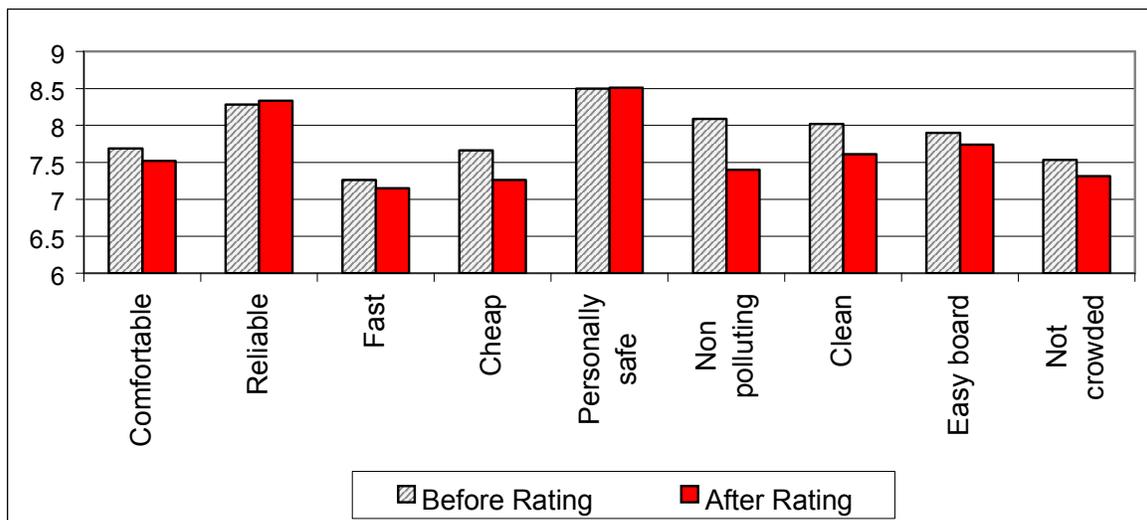
The household survey enabled a comparison to be made between previous stated expectations of use, and that actually observed after opening (see Figure 4).

Figure 4: Expected and actual use of Tramlink



A number of groups indicated greater use than previously expected, notably among the older users. In terms of the rating of importance of various factors, some were found to be of less importance after opening, such as vehicle cleanliness, probably a function of meeting a necessary acceptable standard from the start.

Figure 5: Importance of service attributes



Some 28% of education purpose trips are made on Tramlink, a higher share than initially expected [6% of journeys on Tramlink were classified as educational in the users survey, 28% of all education based trips surveyed in the post-opening study were undertaken by Tramlink].

The ‘agents of change’ survey, using a qualitative approach, indicated a generally positive response, notably from retailers in central Croydon.

"So instead of the centre of Croydon just being a narrow strip ... there will be another frontage to the retail scene within Croydon, and Tramlink will underpin that."

In summing up, the main conclusions were considered to be encouraging with 19% modal shift from car, and the fact the ‘prior perceptions’ had been exceeded on some factors.

Discussion

In discussion, a number of issues were raised.

Robert Cochrane (Imperial College and independent consultant) asked whether Croydon illustrated the scope for replacing heavy rail by LRT, citing the parallel case of Manchester Metrolink. This was agreed to be the case in some instances, stress being placed on the benefits of new low-platform, easily accessible stations in contrast to retaining older structures.

Roland Niblett (Colin Buchanan and Partners) raised the question of changes in land use. These have not yet been assessed, and would require a longer period of study.

Peter Gordon (AEA) raised the issue of whether house prices changes would be an indicator. In reply, it was stated that the ‘agents of change’ study had included estate agents’ perceptions, but more data was required on this [a related issue is presumably the fact that housing in public ownership at New Addington would not provide the transaction data for this purpose]. He also raised the question of whether forecast versus actual ridership varied in particular sub-markets. It was indicated that the Wimbledon line accounted for a higher share of total ridership than forecast (40% compared with about 31%).

Lennox Davidson (LB Croydon) asked about park and ride provision. While no formal provision has been made, there is evidence of car being used as an access/egress mode (see above) and this may be causing problems for residents

in some areas, requiring more substantial provision. Residents in New Addington were now lobbying for such provision, having been opposed earlier.

John Slaughter (LB Wandsworth) enquired whether there were any accessibility losses, as well as gains (e.g. passengers from parts of New Addington still finding bus service 130 more convenient, which had been reduced in frequency). It was indicated that high use had been retained in general, but TfL recognised a ‘different role’ for bus, not cutting frequency in direct proportion to demand falls.

Robert Johnson (University of Westminster) asked about the role of feeder buses. It was indicated that it was planned to look at New Addington patterns in more detail. Some of the feeder bus demand was simply due to reductions in through services.

Ian Plowright (University of Westminster) asked about the high use of East Croydon – how did this compare with former bus flows? Directly comparable data was not available.

An issue raised by a number of questioners (Peter White University of Westminster, Nigel Harris of the Rail Consultancy, Aileen Hammond, Wynne Jones of TfL rail services) suggested that there might be wider impacts of Croydon Tramlink in relation to use of national rail. For example, reducing travel time from New Addington to East Croydon might make total journey time to jobs in central London acceptable. There was also the issue of non-residents of the study area using Tramlink – for example, travellers to/from the Brighton/Gatwick line being able to interchange easily for Wimbledon or Beckenham. In reply it was suggested that household interviews already carried out in the study areas could reveal more data, but in other cases further survey work would be necessary. There is also the question of identifying accurately ridership within central Croydon as a result of short trips being made by national rail users.

Greg Marchant raised the question of social exclusion, now high on the government’s transport agenda. In general, the surveys had indicated transfers by all Socially Excluded Groups, with the highest being for pensioners.

An overall question was how far the Croydon results could be transferable to other proposed light rail schemes. Scope for heavy rail conversion (notably the Wimbledon branch) and the existence of a large poorly-served housing area at New Addington was not necessarily matched in other cases.

Roger Mackett, chairman of TEG, thanked both speakers for their comprehensive presentations, and for responding to the wide range of issues raised.

Report by Peter White, University of Westminster

Strategies for Low Cost Airlines

Dick Dunmore, Steer Davies Gleave

University College London

26th March 2003

Dick Dunmore stepped in to present a talk prepared by his colleague Simon Smith from Steer Davies Gleave, who had to be out of the country on business.

Who and what are the low cost airlines?

There are several low cost airlines in Britain. The largest two are Irish based Ryanair, which has recently acquired Buzz from KLM and easyJet which acquired Go Fly from British Airways last year. Smaller examples are bmibaby, part of bmi British Midland and My Travel Lite part of the Airtours group.

Ryanair is known for its no nonsense approach, threatening to close down Buzz if its staff did not agree to more onerous work conditions, and making a number redundant in the process.

Globally the largest and most successful low cost airline is Southwest in the US. The vast majority of low cost start-ups in the U.S. have gone bust and Southwest is an exception to the rule.

Indeed. Southwest pioneered the low-cost model. European low-cost carriers have all followed this to an extent:

- high seating density and load factors
- uniform aircraft types such as the 737 (Southwest, Ryanair, easyJet although easyJet is moving to an Airbus fleet)
- direct bookings: internet or call centre with no sales commissions
- no frills such as "free" food/drinks, lounges, Frequent flyer schemes or connections
- simple systems of pricing for yield management
- use of secondary airports to cut charges and turnaround times

Successful low cost airlines are currently more profitable than established full service airlines.

It should be noted that margins may be very different now. United, for instance, is operating under bankruptcy protection and losing money heavily.

Ryanair has a market capitalisation of £2.7bn, twice that of British Airways.

Low cost operators are causing problems for established carriers.

Leisure travel tends to be driven by northern Europe, which the speaker characterised as “remote, cold and rich”. The British, Irish and Scandinavians have to cross water in order to get anywhere, making surface travel more difficult. The British, Dutch and Germans are the biggest travellers.

BA faces more low cost competition than any other major European airline.

Cutting flights and operating fewer frequencies with larger aircraft won't work as it would be less attractive to high paying business passengers, low cost airlines would pounce on the slots the established carrier gives up (as easyJet has with BA's at Gatwick), and it needs a high frequency to maintain a feeder network.

However, cutting aircraft size increases costs per seat mile even more. Cutting costs is the only option, but is hard in a heavily unionised environment. Other national carriers gave an even greater need for feeders to their hubs, none of which has as large a local market as London.

What is the market for low cost airlines?

Entry spurs an increase in demand. On some routes the low cost carriers have become the major operators. Growth on routes averages 4.4%, but rises to 10.5% in the first two years after the entry of a low cost carrier. Ryanair is the most frequent operator to Dublin whilst easyJet offers many or more frequencies as BA to Geneva, Nice, Edinburgh and Barcelona. High frequencies attract business passengers.

Some traffic is new, but some comes from other airlines. Take for example London to Glasgow. From nothing in 1994 the low cost share has risen to 44%. If it is assumed that "natural" growth is 5% p.a., the low cost airlines share is 66% new or growth and 34% has come from other airlines. Other airlines traffic is 26% down due to low cost operators.

How much "lower cost" are the low cost carriers?

The new carriers cheap fare offers are heavily publicised. Current available offers to/from London (all single fares) include:

Dublin	€20.00	Ryanair
Milan (nearly)	£9.00	Ryanair
Edinburgh	£10.40	easyJet
Barcelona	£10.40	easyJet

However, "low cost" does not always mean low price. Prices were checked for a weekend in Madrid on 25 February returning on 3 March, booked two weeks in advance, and easyJet was easily the most expensive.

EasyJet	Luton	£210
BA	Gatwick	£77
AirEuropa	Gatwick	£91
EasyJet	Gatwick	£130
BA	Heathrow	£98
Bmi	Heathrow	£98
Iberia	Heathrow	£99

For 24 hours in Madrid, booked a week in advance easyJet is still not the cheapest:

easyJet	Luton	£80
BA	Gatwick	£77
easyJet	Gatwick	£100
Iberia	Heathrow	£114
BA	Heathrow	£548

A few years ago, "full-cost" airlines would have made passengers buy a £600 fully flexible business class ticket for this type of flight.

The effect of yield management

Historically, airlines designed fares to charge passengers as much as they were willing to pay, using classes of service such as first, business/club and economy to differentiate the service and applied to conditions to reduced fares. These included restricting validity to return tickets, limited or no flexibility, the Saturday night rule for short haul and 7/14 day rule for long haul, and requiring passengers to book in advance.

Traditionally full fares were distributed through travel agents, with corporate discounts offered to larger customers, with cheaper fares sold through discounters.

The availability of discounted fares could be adjusted in response to variation to demand, but this had to be done a flight-by-flight basis.

Low cost airlines use simpler, more flexible, pricing. As a rule they normally use only one rule, a variant on advanced booking. Price-banded seats are sold "first-come-first-served": in other words passengers must book early for the cheapest fare. The price automatically responds to variations in demand. The airline can still adjust price bands if demand is greater or less than expected.

easyJet only offers one type of fare - one class, one way, one set of (flexible) booking conditions. Ryanair now appears to do this as well.

Effectively the airline estimates the "willingness to pay" yield curve backwards from the departure date, and each fare is the "strike price" at which it is confident it can sell all the remaining seats.

BA and other "full-cost" airlines now price band, but only for inflexible seats in economy. Rail operators have failed to respond ... so far!

The cost structure of low-cost airlines

Low cost carriers do achieve lower costs per available seat kilometre (ask) in various ways (see Figure 1).

Density is higher. For example easyJet has 148 seats against 124 for British Midland, which includes 8 rows of business class seats.

Aircraft utilisation is higher with 11 hours a day in the air for easyJet aircraft compared with 8 for BA's equivalent. Low cost carriers often use minor airports meaning no need to stack and shorter taxi times. Turnaround times on the gate are usually lower.

easyJet has 52% lower costs per seat, and because their average sector is longer a 64% lower cost per available seat kilometre. The low cost carriers operate with a higher load factor so have even lower costs per revenue passenger kilometre.

What is the impact on long-distance rail?

Figure 2 shows Steer Davies Gleave estimates of one way airline costs and rail fares from Barcelona.

Rail can still be cheaper than air for long distances, for example Eurostar has a £109 return fare from London - Avignon on summer Saturdays when air charges much more. However, even with British pricing flexibility, rail fares vary much less than airfares. For example, GNER charges the same for a weekend return to Edinburgh in February as during the Edinburgh Festival.

Figure 1: Breakdown of cost savings

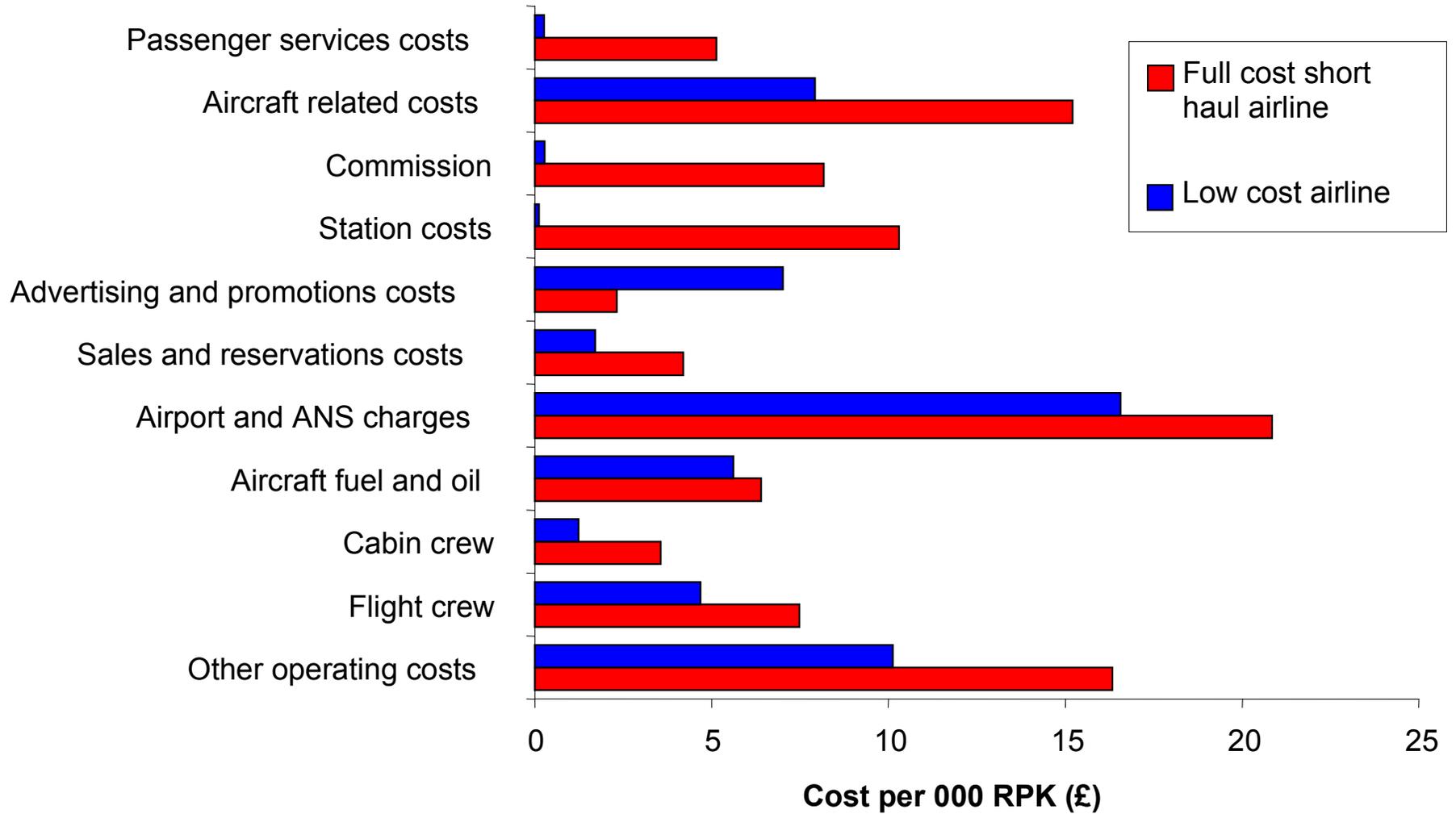
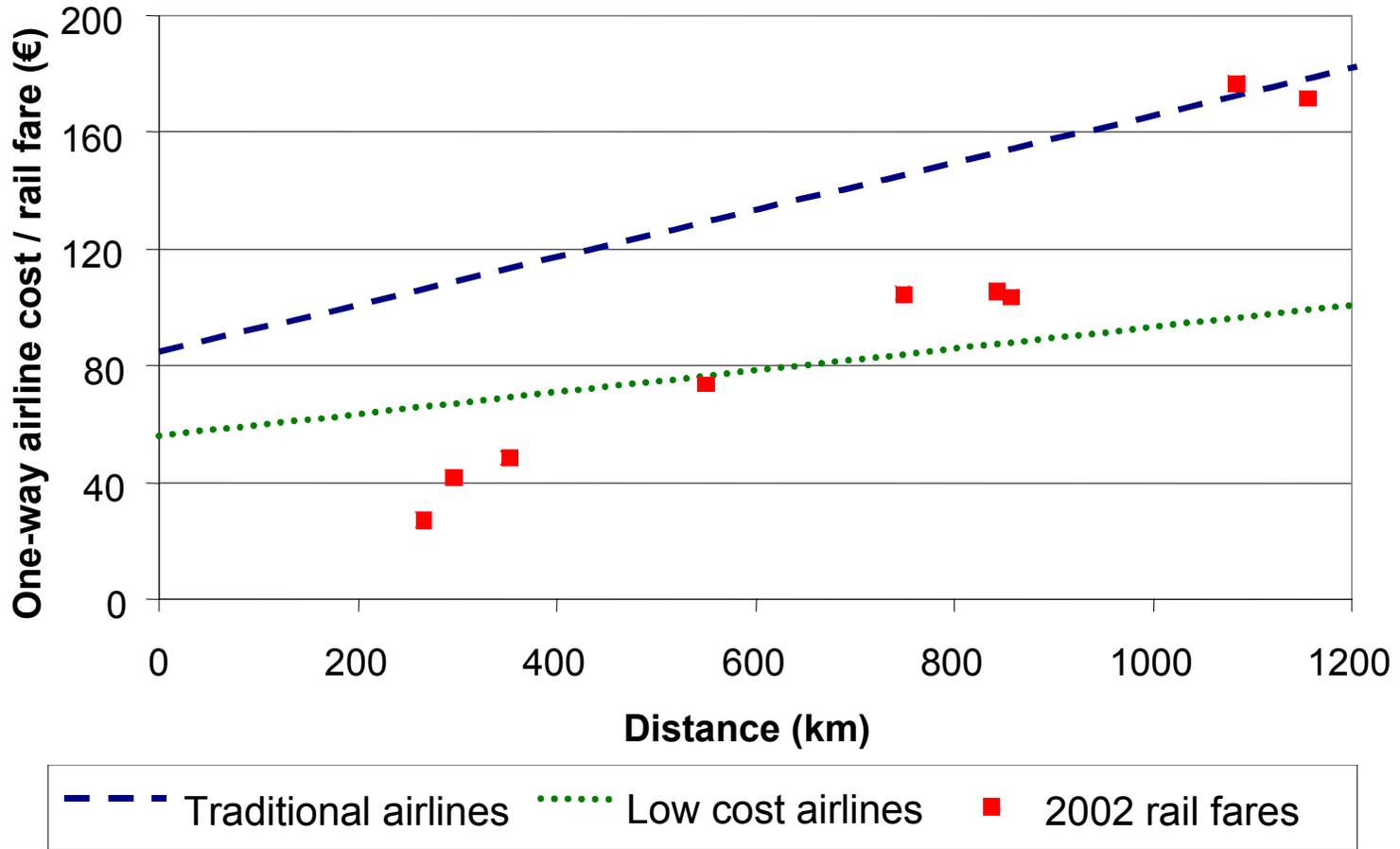


Figure 2: Airline costs per passenger, and rail fares, from Barcelona



Cheap rail tickets, where they exist, are inflexible and/or returns only. Eurostar's cheapest single to Paris is £149 whilst easyJet charges as little as £17.50 including tax. Rail fares can only be booked 60 days in advance, which is no use for holiday trips where people often book months in advance.

Rail tickets are often difficult to book online, and it is harder to find cheap fares. SNCF is reported to be considering establishing a low cost operation. The question is how?

What are the key strategies for success?

Despite the overall success of the sector, most low cost airlines fail. Indeed in US almost all the low cost carriers set up more than a few years ago failed with the exception of Southwest. This includes Pro Air and ValuJet.

In the UK AB Airlines and Debonair failed, Buzz was sold to Ryanair for a nominal sum of £15m (and it is not really clear what they got for that) whilst Go lost £47m in its first two years. On the continent, Virgin Express reduced its network in 2000, closing an Irish based subsidiary.

To survive airlines need to be genuinely low cost. Virgin Express suffers from high Belgian labour costs and from inheriting overheads from the predecessor charter airline. Debonair tried to operate in the middle ground offering some frills. Buzz suffered from a mixed, unsuitable, fleet and from inheriting overheads and higher costs from KLM uk. Costs per ASK were 8.4p and 4.9p for easyJet.

easyJet is lower cost, but only Ryanair is really cheap. Differences in strategies between the two are becoming clearer. easyJet primarily uses new aircraft whilst Ryanair does not. easyJet aims to build frequency, Ryanair generally just aims to expand its network. easyJet usually flies to major airports, Ryanair may serve an airport 100km from the city it serves. This means that easyJet can face problems of congestion at airports such as Gatwick and Charles de Gaulle. easyJet's customer service is less bad (there is, for example, limited compensation for delay).

These differences are apparent in the marketing strategies of the airlines. easyJet is overtly targeting business passengers to help offset the fact that most of its leisure passengers want to travel at the weekend and during holiday periods. This strategy makes it more of a threat to established airlines, but it also carries more risk.

In the U.S. JetBlue is more overtly pursuing an "intermediate" strategy. In Australia, Virgin Blue offers more service on longer domestic sectors.

What is the future for the low cost sector?

Low cost travel in Europe is still less widespread than in the U.S. Ryanair and easyJet are planning to continue rapid growth. Indeed, easyJet achieved growth on its own routes (excluding the acquisition of Go) of 51% in 2001/2. This risks leading to greater competition, including between low fare carriers, more direct competition with major continental airlines, management and operational problems as low-cost carriers grow into big airlines and capacity constraints in Southeast England - although this could lead to higher profits.

General risks to the aviation sector such as aviation fuel tax and higher airport charges could high low cost airlines harder.

Traditional airlines are beginning to respond. BMI has adopted an economy class ticket structure quite similar to easyJet's whilst BA has also copied elements, although it is much more restrictive and absurdities remain - for example singles cost more than returns.

They are also trying to cut costs. Travel agent commissions are being cut, usually to zero. Internet booking is now easier. There is a wider use of e-tickets, with large surcharges for paper tickets. BA has standardised on two aircraft types at Gatwick. Whilst in the U.S., established carriers cut costs in response to low cost airlines.

Some low cost carriers risk a reputation for poor service as they grow. Poor service on Ryanair and easyJet attracted press attention last year, not least because they are not low-price during the peak summer period. If flights are cancelled passengers can be stranded, perhaps for days. easyJet provides very limited compensation and Ryanair nothing. There is a story that Ryanair would not offer compensation for a cancelled flight but pointed out that they still had the money for the return leg which the passenger might be unable to use.

On some routes 75% of Ryanair flights are late. For example according to the CAA (June 2002) on the London - Rome route 73% of BA flights arrived within 15 minutes of schedule, 61% of Go flights and 38% of Ryanair flights. Ryanair tells passengers not to try to make connections.

There is more potential for growth outside the UK. Low cost services are very limited in most big Continental European cities, at Amsterdam, Geneva and Paris (easyJet) and Brussels Charleroi, "Frankfurt" Hahn and Stockholm Skaavsta (Ryanair). However, low cost services are still very limited at some major destinations such as Paris, Copenhagen, Milan, Madrid and Rome. Often the only low cost services are to the UK.

This is, however, more risky than expanding from the UK or Ireland. Continental European Governments may do more to protect their "flag-carriers" than the British and Irish governments. After a court battle with Lufthansa,

Ryanair was banned from advertising fares in Germany and from referring to Frankfurt Hahn by its real name.

easyJet is now seeking slots at Paris Orly airport, but the French government's year long (but now terminated), protection of Air Lib kept it out. An EU investigation has been launched into Ryanair's deal with Charleroi airport, as this might constitute state aid.

To compete for business traffic, low cost carriers need to build frequency. However, this will be hard on routes away from London because there isn't enough demand. Competition from trains, and private cars, is more of a threat elsewhere in Europe: the English Channel (and Irish Sea) make these less attractive.

Low cost airlines can also compete with charter carriers. easyJet now offers a number of routes to airports previously dominated by charter carriers such as Malaga, Palma de Mallorca, Ibiza and Alicante.

However, Charter carriers have several advantages such as even lower operating costs than low cost carriers due to even higher utilisation, sales and distribution costs are close to zero and load factors are 95% or higher. No frills (food and drink) becomes less attractive in routes of over three hours. Charter carriers are now selling seats to scheduled passengers. As low fares are already available in these markets there is less scope for growing the total market size.

There will be pressure on the sector to consolidate. The U.S. experience has been that only the largest carriers such as Southwest survive. In the U.K. low-cost airlines are beginning to compete on the same routes. The cheapest (Ryanair) has forced out others such as Go. Ryanair's CEO, Michael O'Leary, has predicted that only two low cost carriers will survive, Ryanair and, presumably, easyJet.

However, whilst carriers such as Buzz and Go have been taken over, others such as My Travel Lite, bmibaby and Germanwings have appeared.

Summary

Costs are genuinely lower, and need to be if a low cost carrier is to survive.

Fares are lower on average, but not always. The key point may be that full-service airlines are forced to cut their fares as well.

There are clear differences in strategy between easyJet and Ryanair. easyJet's strategy is riskier, both for it and the established carriers.

Market growth has been spurred but some passengers have transferred from established airlines and surface transport.

Low cost airlines plan expansion but this entails risks.

Smaller low-cost carriers are likely to fail or be merged into the larger carriers.

Discussion

Peter Gordon noted that not all websites offer all booking functionality. For example, BA's low cost fares can be booked "open jaw" through Opodo but not through BA's own site. Checking several sites is sometimes necessary.

Derek Done (Derek Done Associates) commented about the difference between value and price, and yield management systems used by the carriers

Andrew Lucking commented that that the charges incurred by different operators varied considerably.

Greg Marchant asked if franchising actually reduced operating costs. The speaker said that it did.

David Starkie (Economics-Plus) asked if it was as simple as easyJet for business and Ryanair for leisure? Dick said that there was an element of this. There was also the question of different national psyches. He said that rail fares were fiddly to set because of the very large number of seats and there was tremendous pressure not to deregulate.

Alan Peter asked if there was a crossover from regular to lower fares. Dick said that as the carriers became more established some people would automatically think that they offered the best fares even though that might not be the case, and that some potential travellers would not bother to shop around.

Nigel Harris said that there appeared to be no mention of safety and security. The speaker said that there was an independent safety authority and that the new carriers did appear to be safe. A subsequent questioner noted that Ryanair is regulated by the Irish Aviation Authority. The speaker said that all EU countries come under ambit of the Joint aviation Authority (JAA) and there is no evidence that safety regulation is any poorer in Ireland.

Andrew Evans pointed out the railways suffer from national boundaries, and that the railway industry is less flexible.

Report by Peter Gordon, AEAT

“Oyster” and “Pre-Pay”

Malcolm Fairhurst, Fares and Ticketing Manager, TfL

University College London

28th May 2003

Malcolm Fairhurst, spoke on the background to, and proposals for, new ticketing systems in TfL.

Bus

Between 1981 and 2001, bus travel in the Metropolitan areas outside London fell from 2.0 to 1.1 billion trips, whereas within London, after remaining broadly static during the 1980s, it rose from 1.1 to 1.4 billion trips and is expected to exceed 1.6 billion trips in 2003. This means that bus travel in London has nearly tripled its size relative to the other Metropolitan areas. Bus's share of commuting across the central London cordon, which excludes the Isle of Dogs, fell from around 10% to 7.7% during the 1990s, because most of the increased bus use in London has been in the suburbs. Early indications are, however, that much of the lost commuter volume is returning with the congestion charge. Falling commuting by car, down from 19% in 1981 to around 8.7%, means that bus is now overtaking it as a mode for commuting to central London.

Explanatory factors for the general growth in bus use in London include lower car ownership in London than in the rest of England and Wales and the changing demographics of the capital. While Britain as a whole is getting older, London is getting younger, with the number of over-65s falling by around 10,000 a year and being broadly replaced by under-14s.

In addition, effective real bus fares have been falling steadily since the election of the Mayor, partly because of the move from cash to bus passes and Travelcards, which allow, and stimulate, extra travel at no extra cost. Malcolm presented an index of travel costs, which showed that in London rail travel is typically twice as expensive, but bus travel a quarter cheaper, than in Tokyo, Paris and New York.

A cashless strategy is now emerging for London's buses, with increased sales through retailers, “Oyster” smartcards replacing period tickets and “Pre Pay” as a stored-valued alternative. Introduction will be phased, starting in Zone 1. 100,000 staff, spouses and retirees entitled to free travel are already trialling Oyster. The next step will be for season tickets, for which real money has been paid, which will be rolled out from autumn 2003. Stored-value will come last.

Because London's bus exits are "open", with no checks on alighting, the system will be "touch in", although there will be provision to debit a larger fare if the passenger requests (or admits to) a long journey. Inspectors will be able to read Oyster cards to confirm that the current journey is authorised. Other approaches mentioned from the floor include:

- Hong Kong buses, where the debited fare falls as the buses progresses along the route
- Seattle, where inbound fares are charged on entry and outbound fares are charged on exit
- Japan, where passengers collect "stop boarded" tickets and then pay a distance-based fare on exit.

Underground

Underground demand appears to be cyclical. AM peak commuting across the central London cordon shows troughs in 1980 (1030 million passenger journeys) and 1995 (970 million passenger journeys) before apparently peaking at around 1100 million passenger journeys and, on provisional figures for 2002, now being in slight decline.

The Underground, unlike the buses, is generally a "closed" system and Pre Pay will allow irregular or infrequent users to pay with "touch in touch out" entry and exit checks. Effectively the maximum fare is debited on "touch in" and a refund calculated on "touch out".

Oyster will be able to have a Pre Pay element, for example to pay automatically out-of-Zone excess fares. TfL is looking at Pre Pay functionality to allow peak/off-peak and early bird pricing, different fares in peak and counter-peak directions and also through pricing for "Underground plus bus" journeys.

National rail

National Rail is partly involved in Oyster, which will be able to open their gates, but there are a number of complexities. National Rail will not become involved in Pre Pay until later, partly because it would mean overhauling fares to be fully zonal rather than point-to-point.

Discussion

Peter Gordon (*AEA Technology (Rail)*) wondered whether this differential functionality meant that National Rail commuters would start to buy their tickets at the London end. **Dick Dunmore** (*Steer Davies Gleave*) foresaw benefits in them being able to pay in advance, when and where convenient, reducing the "Monday morning rush" (Why do so few passengers seem to think of buying a 7-day ticket on any other day?) Malcolm mentioned the need to

agree cash settlement processes between TfL and ATOC for all these various issues.

One questioner asked about the expected length of queues of people adding value to Prepay tickets. **Dick Dunmore** *had experience of a poor (canteen) system where the maximum stored value was only sufficient for 3-4 typical transactions.* **Robert Cochrane** *(Independent Consultant) indicated that this was not a problem in Hong Kong, where the stored value, including the original deposit, must be above HK\$50 (about £4) to be allowed to start a journey. People there typically top up sufficient value for 10-15 trips, encouraged by a travel “bonus” tied to a large top-up.*

Someone asked whether Pre Pay would be rechargeable by phone, and Malcolm confirmed that this would be possible. Phone links can also be used for downloading cash receipts from on board card readers on buses and minibuses.

Robert Cochrane *said that studies in Hong Kong showed that the Smartcards can save ticket issuing and cash collection costs on a “closed” system, but that on buses the only way to reduce costs is to combine smartcards with going completely cashless.* Malcolm agreed. Cash use on bus is now around 20%, and less in central London, but the aim is to get this below 10% with Pre Pay.

John Cartledge *(London Transport Users Committee) was concerned that the elimination of cash might increase exclusion.* Robert Cochrane offered evidence from Hong Kong of the opposite effect, where people bought Octopus cards for elderly relatives to eliminate the need for them to remember or handle cash. Malcolm also pointed out that the disabled would have passes which opened the manual gates. John was also concerned that refund arrangements between TfL and National Rail might not be symmetrical, and queried the need for a name such as Oyster. Malcolm pointed out that Oyster was not, in law, a ticket, and should have a name which reflected this. Robin Whittaker pointed out that a ticket is a legal and not an accounting document, which led to some discussion of the legal status of airline “e-tickets”.

Dick Dunmore, *thinking of the problem of One-day Travelcards being used by a second passenger, asked whether the new tickets introduced any means of abuse.* Malcolm pointed out that in so far as One-day tickets were replaced with Pre Pay with a daily “cap”, passengers would not want to give away any remaining stored value. Simple Smartcards are transferable and equivalent to cash, but “buyers” might have no way of knowing the value on the ticket. Cards incorporating season tickets and carrying high amounts of cash would not be transferable but could be registered. Malcolm pointed out that registration is possible in Hong Kong, although the take up is low as average travel distances and fares are low and the cards do not include season tickets.

Dick Dunmore *also asked whether issuing refundable tickets to unknown customers breached international money-laundering agreements.* Malcolm said that the threshold at which these applied appeared to be €150.

Peter White *(University of Westminster) asked if Oyster or Prepay would help gather data for transport planning, citing the labour-intensive task of estimating Freedom Pass use.* Malcolm pointed out that surveys would often remain the most reliable and cost-effective instrument.

Report by Dick Dunmore, Steer Davies Gleave

Postscript

From 23 August, Transport for London introduced their cashless system in part of central London, an area bounded by Paddington, Kings Cross, Waterloo and Victoria areas will be "pay before you board"

Revisiting Dr Beeching: the Butcher or the Reshaper of the Railway?

Robert Cochrane, Independent Consultant & Visiting Professor, Imperial College
April 2003

“Beeching’s axe”, “Beeching the butcher” – these expressions still come into journalist’s minds whenever proposals are made to reduce rail services. And the effect of the “shortsighted closure of the railway under Beeching” forms an essential element in the local history of some 2000 British villages.

And yet few can have actually read the Beeching Report – *“The Reshaping of British Railways”* in the forty years since it was published. The copy in front of me has only been borrowed from the library six times since it was purchased in March 1963.

First, the man. Richard Beeching was a metallurgist trained at Imperial College and Mond Nickel before he joined ICI. He is remembered by colleagues as having an absolutely brilliant analytical brain. Ernest Marples appointed him Chairman of the British Transport Commission with a specific brief to restructure the railways.

The Report itself is a pair of small paperback volumes. It was written almost entirely by Beeching himself. The brief is set out in the introduction, which quotes Marples:

“The industry must be of a size and pattern suited to modern conditions and prospects. In particular, the railway system must be remodelled to meet current needs, and the modernisation plan must be adapted to this new shape.”

The main Report is only 60 pages long and the freight section is twice the length of that devoted to passenger services.

This reflects the relative importance of reshaping in each of area of business – it is often forgotten that in 1961, freight receipts still represented over half the total railway receipts. Moreover coal, which provided 40% of freight receipts, only just broke even and traffic was falling at 5% per year. All other freight categories made losses.

Beeching’s analysis of freight still makes sense. He recognised that coal traffic would dry up apart from short trainload movements to power stations. And he saw that only siding to siding bulk freight and “liner train” general freight could in future make money. Wagon load operation and the marshalling yards had to go.

But the difficult part, analytically as well as politically, was the passenger services. Beeching made a heroic and only partially successful attempt to

separate the fixed costs of track from the variable costs of track and service operation as a step towards determining whether the problem was unprofitable services or surplus routes. The report has been criticised for over-emphasising fixed costs and hence being biased towards route closure.

But in the end, this distinction was not of great significance. The great majority of the rural lines he proposed for closure (nearly a third of the route miles) could not support the variable costs of service operation, let alone the fixed track costs. And his analysis confirmed that existing stage and express coach services could readily replace rail services. He was undoubtedly right in recommending closing most of the rural network.

Beeching's positive proposals for passenger services have also remained valid. He foresaw the need for the development of what he termed inter-city services. He accepted the ongoing need for urban rail services as part of local transport systems, although he did not tackle the problem of the cross-subsidy needed if the railway was to break even overall.

Cogent criticisms can be made. The most important was that he did not tackle the financial structure of the railway, which was already technically bankrupt at the time of nationalisation in 1948. His analysis of the savings to be made from increased efficiency was also sketchy - the railway had at least 100,000 too many staff at the time. And he probably made some closure mistakes at the margin.

Nevertheless, the report is a quite remarkable "Consultants Report", particularly in the light of the archaic cost accounting on which he had to rely. He addressed the limited brief he had been set in a logical manner and recommended a sensible set of proposals.

But it was not a "Chairman's Report" – he addressed only a part of the problem, and did not stay to manage the changes he recommended. In the absence of restructuring and a wider efficiency drive, his closures did not achieve the expected savings.

It was left to his successors to deal with these issues – the managers to implement the closures, Stuart Joy to develop an economic framework which allowed surgery rather than amputation and Bob Reid I to tackle the archaic organisation and basic inefficiency.

Significantly, these weaknesses are not why he was hated. The British are emotionally attached to railways. They see a rail track and feel confidence that a passenger train will appear. A road gives no certainty that a bus service will appear or survive. And railway lines lead "up" in some physical sense to London, the centre of power and financial subsidy. Beeching cut this link off from some 2000 rural communities, forever.

Beeching is reviled for his greatest qualities. He cut through the sentimentality and adopted a hard-nosed approach to the business. The railway did need cutting down in size. His analytic toughness and lack of sentimentality was his strength, and it is why we should remember his report today with gratitude.

But what would Beeching say if he were here now? He would see freight subsidies designed to transfer freight from road to rail with no clear socio-economic justification as being ludicrous. He would point out that that few, if any, of the rural railways saved from his closures are justified on economic or social grounds. But as to the major problems (such as system reliability) facing the railway today, his views would depend on whether they formed part of his brief and whether he had applied his formidable intelligence to them.

Beeching's strength and failure was that he acted as a consultant, not as a chairman. A chairman must make sure that the whole range of transitional problems facing a business is addressed and then lead his staff through the wilderness. A railway chairman needs to combine Beeching's intellectual toughness with Bob Reid I's leadership skills.

TEG NEWS

The Editor,

The Transport Economist

28 July 2003

Sir,

In his paper "*The Future Development of Air Transport in the UK: the South East*" (The Transport Economist, Spring 2003), Reg Evans states the official forecast that if demand for air travel at SE airports were unconstrained, the number of passengers would rise by 257 per cent over the thirty-year period 2000-2030. The government seems to regard this figure as a target that has to be met, if not completely at least very largely.

What does "unconstrained" mean in this context? The forecast is presumably based on some extrapolation of current trends, but is air travel unconstrained at present? In addition to the fares, the growing hassle of air travel must already be a deterrent to some people. So the term "unconstrained" must refer to a situation in which the price, convenience and comfort of air travel remain much as at present, or continue to develop as they have developed in recent years. It would be difficult to achieve that condition, in the face of a huge increase in passenger numbers. At least for prices, it would be wrong even to try to achieve it, given the anomaly that aircraft fuel is not taxed at present.

The forecast must also rest on a similar assumption that the destinations of air travel will remain as attractive as they are now, despite the increase in the number of visitors. Presumably, the techniques used in the study of SE airports would produce similar estimates of growth if applied to other regions of the UK or to other European countries. But would a weekend in Paris (to take one example only) still be worthwhile if Paris had to cater for 3.5 times the present number of visitors? Would Parisians be prepared to accept such an influx and, even if they were, could their city accommodate it?

There is no point in a travel forecast based on undesirable and unachievable assumptions. Both for airport planning and transport planning more generally, trend planning, in the form of "unconstrained demand" forecasts, should have been discarded long ago. The challenge for transport planners is to identify the constraints and to work out their implications.

Yours faithfully

Stephen Plowden

New Publications

Delivering Sustainable Transport - A Social Science Perspective, (ISBN 0-08-044022-3) edited by Amanda Root was published in January 2003. It is published by the Pergamon at £57.80 or, alternatively, at €84 from Elsevier Science BV, PO Box 211, 1000 AE Amsterdam, The Netherlands.

The book considers the wider social influences of how the transport system is shaped. It draws together twelve different essays covering diverse topics such as modernity and globalisation of transport, the limits of economics, the automobile era - a cultural analysis, transport social exclusion and westernising travel policy - rickshaw pullers in Calcutta. The contributions were drawn together in four sections:

1. Globalisation, Markets and Policy - the need for new paradigms,
2. Post-modernity and reflexivity,
3. Cultural studies, and
4. New dimensions on mobility discourses

The book makes useful contributions to the debate, some by well-known authors in the field. Whilst, it would be have been very demanding to provide all the answers of how to deliver sustainable transport, this book provokes debate.

Transport Economics & Policy (ISBN 0-74-943772-3) by Professor John Hibbs was published in February 2003 by Kogan Page at £25. The book was published in association with The Institute of Logistics and Transport. It takes a four-step approach:

- Part 1 establishes the central economic concepts.
- Part 2 tests these concepts against the principal modes of inland transport.
- Part 3 examines the importance of marketing management.
- Part 4 concludes with a critical examination of future transport solutions.

Alasdair Traill, Senior Lecturer in Logistics at Aston University writes: "*An excellent integration of economic theory and its applications to the field of Transport Policy by a leading academic who has made important contributions to both*"

A Country Busman by John Hibbs, which relates the story of how two young men purchased an old established business near Sudbury, Suffolk - Corona Coaches - in February 1956 and developed local services, private hire, excursions and a service to London. Much of the financial and statistical

background is illustrated. The book is a source of local history for the general reader, enthusiast and transport professional. The book is published by DTS Publishing, PO Box 105, Croydon CR9 2TL at £14.50 post free in the UK.

Busman by Bill Peters (DTS Publishing, PO Box 105, Croydon CR9 2TL at £14.50 - ISBN 1-900515-55-5). John Hibbs writes: "As the blurb for this book rightly says *'While bus company and fleet history are well documented, it is seldom that the human side of the job has been told directly from the platform and the cab'*. Economists who fail to take human experience into consideration are failing in their responsibility to society and, while this book is about working for Liverpool Corporation in the 1950s and 1960s, it opens to the reader a whole world of employment, vehicles, ticket machines and, above all, passengers that is there today, and perhaps far too little understood. Toward the end there is the devastating criticism of the early AEC Atlanteans, which goes on to cast doubts upon what was, for this reviewer, one of the great mistakes of public transport policy: the removal of the conductor (or guard, as they called them in Liverpool), and the loss of the back platform. Get it and read it, and *feel* what the job is like on the road."

Recent Reports

Guidance on preparing an Economic Impact Report, prepared with consultants Steer Davies Gleave, is available from:

http://www.dft.gov.uk/stellent/groups/dft_transstrat/documents/page/dft_transstrat_023022.pdf

An Economic Impact Report will be considered as part of the evidence for making a decision on all major transport schemes.

London Travel Report for 2002 has been published by Transport for London. This report brings together statistics relating to travel in London, covering all the major transport modes. It can be downloaded from:

http://www.tfl.gov.uk/tfl/reports_library_stats.shtml

Central London Congestion Charging Scheme - Three months on was published in June by the Congestion Charging Division at Transport for London. It can be downloaded from:

<http://www.tfl.gov.uk/pdfdocs/cc/cc-three-month-report.pdf>

The Strategic Rail Authority has published two reports of particular interest:

Capacity utilisation policy - network utilisation strategy on managing scarce rail capacity on 16 June and

Appraisal Criteria - A guide to the appraisal of support for passenger and freight rail services on 8th April

These can be downloaded from:

http://www.sra.gov.uk/publications/general_default.tt2

Ten-year transport plan: second assessment report, prepared for the Commission for Integrated Transport by FaberMaunsell, NERA, Institute of Transport Studies at Leeds, ERM and Ecotec, is available at:

<http://www.cfit.gov.uk/reports/10year/second/index.htm>

TEG Website

The Group has developed a website for members. Although it is still in development it is now available for viewing. Members should be able to obtain the latest on the programme of talks and other information about the group at.

<http://www.transecongroup.org.uk>

The committee would welcome comments on improvements to the website and any offers of help in further development.

TEG Committee for 2003/4

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