

Appraisal of non-commercial passenger rail services in Britain

Gordon Mills and Martin Howe

University of Sydney *Europe Economics*

Abstract

The appraisal of proposals for adding or withdrawing individual rail services is inevitably complex, because it needs to recognise interdependence both within the rail network and between transport modes, and to account for externalities affecting non-users. Since 1960, British appraisal procedures have changed greatly, as has the institutional setting, especially following privatisation.

In May 1999, the government regulator took a major step forward when it adopted the use of cost-benefit analysis for the appraisal of non-commercial services. Yet there is a need for elaboration of the rules that deal with jointness in costs and in revenues, and for extension of the appraisal scheme to permit multi-modal application. Government policy-makers should also address institutional barriers that may hinder the development of valuable alternative supply arrangements, and instigate a review of existing marginal services to see if they are all worthwhile.

1 Introduction

At the time of our early study of the withdrawal of railway services in Britain (Howe and Mills, 1960), the institutional framework was simple. The British Railways Board (BR) had centralised control of a Government-owned integrated railway. The Government had established Transport Users' Consultative Committees to assess consumer interests; in respect of closure proposals, these committees reported to the Minister on any hardship likely to arise.

Also simple, indeed too simple, was the framework used by BR in examining a withdrawal proposal. At that time most proposals involved branch-line closure. The formal criterion recognised only the financial consequences of the closure. There was particular difficulty in estimating the loss of revenue arising from reduction in travel on the rest of the network. The spatial and other separations of joint costs brought similar difficulties. Furthermore, the scheme of appraisal employed a five-year time horizon, which was too short to recognise effective use of any capital expenditure that might be incurred if the service were to be reorganised rather than withdrawn.

Since that era, both the decision criteria and the context have become more complex. Cost-benefit analysis has become more widely used in the public sector – though (as will be seen below) it has been used little in rail appraisal. The Railways Act 1993 fragmented the industry, privatised almost all the parts, and established two regulatory agencies.

Also changed are public attitudes towards the provision of passenger services. In 1960, rail was in retreat. Since that time, experience with road congestion and increased public concerns about the quality of the physical environment have led to lobbying for improved rail services, including the re-opening of some branch lines. Accordingly, in this new context, this study looks at processes for the appraisal of both closure and opening proposals for non-commercial passenger services.

2 Some developments up to 1993

In 1963, with financial considerations paramount, BR proposed major reductions in the size of the network (BR, 1963 – known as the Beeching report). Individual closure proposals had to be subjected to the procedures of the Transport Act 1962. Many proposals were hard fought, but the majority were implemented. Then, the Labour Government that had taken office in 1964 declared that it would give more weight to social and economic considerations. While further closures were not ruled out, the Government announced its intention to maintain a basic network of about 11,000 route-miles compared with Beeching's 8,000 miles.

Later, the Transport Act 1968 empowered the Minister to give specific grants for up to three years to fund unremunerative services considered desirable on social or economic grounds. Each grant was fixed in amount for its duration, thus giving BR an incentive to find a less costly mode of operation. (This incentive arrangement is an early example of a practice that has now become common in industry regulation – as, for example, in price-capping arrangements.) Sadly, the scheme of specific grants was ended after three years.

Most attempts to encourage local authorities to fund local rail services had little success at this time. For the metropolitan areas, however, the 1968 Act established Passenger Transport Authorities (PTAs); this has proved to be a successful innovation. Each PTA is a consortium of the local authorities of the conurbation, and operates through a Passenger Transport Executive (PTE). It is empowered to take various initiatives, including giving financial support for urban heavy-rail services.

In 1966, the Ministry of Transport established a unit to develop the application of cost-benefit analysis to rail as well as road projects, including the selection of unremunerative rail services to receive specific grants. However, BR's mounting deficit was to overwhelm this commendable effort to appraise and fund services individually. As part of a capital reconstruction of BR, made under the 1974 Transport Act, a distinction was introduced between the 'commercial' and the 'social' railways. A single grant, the Public Services Obligation (PSO) grant, was to be paid to cover the cost of the non-commercial services. This 'large pot' approach reduced the need to assess services individually and, according to one insider, by the mid 1970's "attempts at economic rationality had disappeared" (Welsby, p. 234). The emphasis switched to control of the total business by the setting of tough financial targets and cash limits.

Between 1965 and 1993, the number of closure proposals brought forward by BR was fairly small, although it did include some *causes célèbres* such as the Settle–Carlisle line. The closure procedure remained essentially that laid out in the Transport Act 1962; see Howe (1964) for a description. It was much criticised for its lack of transparency, and for the time taken by the Minister to reach a decision. There were only modest improvements in the appraisal scheme itself. BR (it was said) did not always seek a less-costly method of operation rather than closure, and had every incentive to run down a service in order to help justify closure.

Of course, the fundamental issue remained: how to limit the size of the subsidy paid to the railways, and at the same time ensure the provision of a comprehensive network of services. To address this dilemma, the Conservative Government of 1992–97 turned to privatisation.

3 The new railway structure

The Railways Act 1993 separated infrastructure from train operation, and provided for private ownership. One company (Railtrack) owns and operates the network. Besides rolling stock companies, and some rail-freight companies, there are 25 (franchised) passenger train operating companies (TOCs).

The Act established both the Rail Regulator (RR), who licenses the operation of most railway assets and serves as a competition regulator, and the Franchising Director (FD). The latter is responsible for allocating Government funds to the TOCs, and is charged with promoting the growth of railway travel, improving quality standards and securing good value for (subsidy) money. (The offices of these regulators are called ORR and OPRAF.)

In the privatisation process, the FD invited bids for the 25 train-operating franchises. Most of the resulting contracts are of 7 or 15 years' duration. Each packages the services specified in the Passenger Services Requirement (PSR) of the franchise; the individual services are not funded separately. At the direction of the Minister, the PSR comprised all or almost all the services being operated by BR. (The PSR is a minimum; a TOC may offer extra service frequency, and some have done so.)

The industry's financial arrangements are rounded out by a system of track access charges paid by the TOCs to Railtrack. In the first instance, the charges are negotiated between those parties. However the RR has over-riding authority that (in the longer term) allows influence over the rate of return paid on Railtrack's capital.

4 Withdrawal of services since 1993

The Railways Act 1993 established a comprehensive new procedure for the appraisal and determination of closure applications. Some previous features are incorporated but the new arrangements are more complex, not least because they involve more parties and apply to a broader range of closure circumstances (including, even, closure of *parts* of stations).

The FD controls access to the closure procedure. OPRAF conducts the initial appraisal of any closure proposal, and the FD decides whether the case should go forward. Thereafter, the (regional) Rail Users' Consultative Committee (RUCC) must consider whether the closure would cause hardship and, if so, how that could be alleviated reasonably and cost-effectively. The RUCC reports to the RR, who may also receive individual objections. The RR makes the final decision, subject to appeal to the Secretary of State.

The great majority of closure proposals has been considered under an abbreviated procedure applicable to 'minor' closures: there were 131 such closure decisions in the period 1 July 1995 to 31

March 1999. In contrast, only 10 cases went through the full procedure (and few even of these were substantial in scale). The RR gave his consent to closure in all 10 cases though applying conditions in half of them. In four of the cases there was an appeal against the RR's decision. At 31 March 1999, two appeals were outstanding, one had been rejected and in the other the Secretary of State varied one of the conditions set by the RR. Though not a single 'major' closure has been refused, the more important point is how few cases have been initiated.

While the 1993 Act introduced useful procedural improvements, criticisms remain. The full procedure is complex and time-consuming. The role of the RUCCs remains a narrow one; in particular, economic and social considerations other than hardship to passengers fall outside the statutory remit of the committees (though this has not prevented some RUCCs from including observations on such matters in their reports to the RR).

In the past, the adequacy of financial information provided by the operator of the service has been a bone of contention. Now, although the procedures do not *require* the provision of any cost and revenue data, the FD may expect relevant information to be provided for his appraisal, and the RUCC and the RR may also request information from operators (and, where appropriate, may use licence conditions to get it). Even so, scrutiny of the published closure decisions does not suggest that it is usual for an RUCC or (even) the RR to make a detailed financial analysis. Further, of the 10 'major' cases so far decided, not one has been subjected to a formal cost-benefit appraisal. OPRAF's intentions for such appraisal in future cases are discussed below.

5 The role of local funding

With the authorisation of Section 20 of the 1968 Act, the PTAs began to contract with BR for the provision of metropolitan-area rail services. In the absence of such financial support, provision of at least some of these services might not have been continued, and some lines might have been closed. Government paid for the net cost of these services, by making grants to the Metropolitan District Councils, which in turn supplied funding to the PTAs. On the whole, PTA payments to BR were related to (some concept of) the marginal cost of service provision.

However, from April 1994 (when the Railways Act 1993 took effect), the new regime of track access charges and rental payments for rolling stock served to increase the direct charges for the services, and hence the payments required of the PTAs. Government provided extra funding for the transitional years of 1994-95 and 1995-96.

As agreements were negotiated with TOCs, the PTAs found "anomalies and lacunae in the proposed treatment of PTE-supported services" (*Modern Railways*, May 1999, p. 356). The PTAs fought for sufficient compensation to be embodied in the new Metropolitan Railway Passenger Services Grants that are now paid directly to the PTEs by the Government (DETR, 1999, par. 8.26).

Table 1 Payments¹ by English local authorities for local rail services, 1997–98, £ million

Unitary authorities ²	0.24
Shire counties ³	1.52
Shire districts	0.09
Passenger Transport Authorities ⁴	246.57
Total	248.42

Source: Personal communication from DETR, 12 May 1999.

Notes:

- 1 Net payments, to support current expenditure
- 2 Only two such authorities make payments: Bristol and South Gloucestershire
- 3 The principal payments were made by Leicestershire (£0.24m) and Nottinghamshire (£0.85m)
- 4 These payments were funded by DETR grants to the PTAs

Total Government support for local-authority rail services in Britain increased from £111 million in 1993–94 to £272 million in 1997–98 (DETR, 1999, Figure 8.b). This clearly demonstrates the increase in the financial resources needed to fund a set of rail services that did not change much during this period. On the other hand, the PTEs and other local authorities may seek lower contract prices in later years, though they enjoy less bargaining power than OPRAF.

It was for each PTA to negotiate the *form* of its contract with each ‘local’ TOC. West Yorkshire and Greater Manchester PTEs assign both the revenue and cost risks to the train operator. The others assign the cost risk only, and use supplementary conditions intended to give the train operator financial incentives to provide good service quality and to market the services effectively.

Besides those contracts, several PTAs have sought better service quality and lower (operating) costs by investing in light-rail and metro services, in place of traditional suburban heavy-rail service.

It is open to local authorities other than PTAs to give financial support for local passenger services. Several do so, and a few make fairly substantial payments, though the total expenditure is very small relative to that of the PTAs. For English authorities, data are given in Table 1. Also, public pressure for restoration of railway services has encouraged various local authorities to consider the re-opening of services closed by BR. Details of two interesting examples are given in Table 2.

The re-opening of the so-called ‘Robin Hood’ line, from Nottingham via Mansfield to Worksop, involved no less than eight local authorities. From the start of feasibility studies, it took almost 6 years before the first part of the line was opened, and almost 11 years in total before the third stage was completed. In part, this was because some infrastructure had been destroyed after the 1964 closure.

In the other case shown in Table 2, the West Yorkshire PTE had arranged with BR to leave the track in place when services were withdrawn. In general, unless the land no longer in railway use has a very high opportunity cost, there seems much to be said for retaining at least the right-of-way together with the track bed and any tunnels.

Table 2 Services restored with local authority support: two examples

	Nottingham – Mansfield – Worksop	Halifax – Huddersfield (via Elland and Brighouse)
Year service closed	1964	1970 (Brighouse Station); summer Saturday through-services ran until 1986
Year service restarted	1993, 1995 and 1998 (3 stages)	May 2000 planned
Route-miles of re-opened track	32 (mainly upgrading of freight line)	2½
Service frequency (weekdays)	hourly (with extra peak train)	hourly (with extra peak train)
Infrastructure track etc. capital cost funded by	£21m Nottinghamshire and Derbyshire County Councils, European Regional Development Fund, DETR (under s 56 of Transport Act 1968), and other Government funds	£4.1m Capital Challenge Grant
station capital costs funded by	£7m as above, plus District Councils	£0.7m (Brighouse Station) ¹ West Yorkshire PTE
Train operator	Central Trains	Northern Spirit
Annual operating support amount funded by	£1.4m (in 1998–99) ² the two County Councils and Nottingham City Council ³	£0.54m in first year; otherwise £0.29m West Yorkshire PTE
Contract features		
service levels determined by	the three local authorities	West Yorkshire PTE
fares determined by	the three local authorities	Northern Spirit
revenue risk borne by	the three local authorities	Northern Spirit
cost risk borne by	the three local authorities	Northern Spirit
other features	performance incentives ⁴	–

Sources: personal communications from officers of Nottinghamshire County Council and West Yorkshire PTE; see also (for Nottingham – Worksop) *The Railway Magazine*, June 1998, pp. 65–69, and (for Elland and Brighouse) *Modern Railways*, November 1998, pp. 768–769.

Notes:

- 1 Rebuilding and re-opening of Elland Station has been postponed because of lack of funding.
- 2 The net deficit increased from £0.27m in 1993–94 to £0.89m in 1997–98. The growth reflects the increases in the length of line being operated, and the transition to privatisation of train operation. From April 1998, Nottingham City Council has contributed funds.
- 3 In 1998–99, OPRAF contributed £0.35m but has not yet agreed to provide funds in later years.
- 4 The penalty/bonus amounts relate to reliability and punctuality, but are said to be too small to have much effect.

6 Financial support for non-commercial services: the OPRAF criteria

To the extent permitted by its limited budget, OPRAF stands ready to support the introduction of additional passenger services that are socially worthwhile even though not commercially viable. Accordingly, in May 1999, OPRAF issued the substantive version (OPRAF, 1999a) of the planning criteria that it intends to apply in assessing such proposals. The appraisal scheme is likely to be applied to service reductions as well (OPRAF, 1999a, par. 2.3); it seems that it would be applied also to any proposals for major closures.

OPRAF will support a proposal for an additional service only if it would not otherwise be undertaken (OPRAF, 1999a, par. 3.11), and provided it delivers economic and social benefits sufficient in amount to justify the required level of OPRAF support (pars. 3.7 and 3.9). To give support, OPRAF may take any of the following actions (par. 4.6): allow exceptional increases in regulated fares (to reflect higher quality of service); where investment in long-lived assets is proposed, extend the length

of a TOC franchise, or (by using section 54 of the Railways Act) commit any future franchisee to continue paying for the services of the assets; and give additional, immediate revenue grant.

Anyone proposing an additional service must submit a ‘business case’. This should identify the objectives of the proposal, define a base case against which any proposed scheme may be compared, screen alternative variants, and for a manageable number of them, project in detail the physical outcomes, the costs and the financial and other benefits. The case must use a social cost–benefit analysis (SCBA) that identifies a comprehensive list of external effects, and accounts for impacts on the various parties, including non-users (chapter 5).

In comparing projects that seek direct revenue support, OPRAF will use as its *principal* ranking criterion the net present value of benefits per £ of OPRAF support (par. 3.8). However, OPRAF is required also to have regard for other policies of the Government, in particular the commitment to integrated transport, while still seeking cost-effective use of taxpayers’ money (par. 3.4).

Where there are benefits or disbenefits that cannot be valued, OPRAF will consider what values would need to be assigned for a scheme to represent good value for the tax-payers’ money, and will then decide if these are reasonable values in the context of the particular proposal (par. 3.9).

Commentary

Although SCBA is widely deployed elsewhere, its use for evaluating railway projects appears to have been neglected. Certainly, the OPRAF statement is the first *public* announcement of such regular use. It is of course one thing to set down the criteria on paper; it is another to apply them systematically in practice, especially in an area as politically charged as transport policy. But the signs are encouraging.

Even so, some concerns deserve examination. When SCBA was developed, its application was to be undertaken by the public-sector planner. Yet here the FD requires the task to be performed by the proponent (that may be a TOC) when preparing the business case. Guidance for this delegated role (OPRAF, 1999a, pars. 6.36 and 6.37) includes the requirement that “Financial costs should be measured on an avoidable cost basis”. Sadly, this principle is clouded by the remaining guidance.

Even though OPRAF may call for additional information, including “the underlying assumptions and calculations” (par. 5.18), it is not clear whether OPRAF will be able to judge with authority the proffered treatment of joint costs. In an era of privatisation, a bidding competition might be used to determine the ‘avoidable’ cost. But this mechanism seems to be unavailable at the stage when OPRAF is deciding whether or not to fund. This is a matter that OPRAF needs to tackle.

Similarly, there is a risk that a proposer may understate the financial receipts, while overstating the non-financial benefits. However, the use of SCBA limits the scope for such distortion, since many distorting strategies will yield inconsistencies in the SCBA outputs.

In the absence of any other policy considerations, the ranking rule would reflect the budget constraint(s) only in an approximate manner (Weingartner, 1963). Given that other considerations must be taken into account, however, the procedure should be capable (in general) of yielding ‘sensible’ results, which is all that can be expected in practice.

In emphasising the ranking of proposals by the ratio of net present value of benefits per £ of OPRAF support, the FD seems to embrace the standard prescription of neo-classical economic analysis for capital-rationed situations. This implies that the *same* test-ratio should be applied to all proposals, whether for closure or reduction of services or for additional services.

Unfortunately, there may be difficulties in applying the rule in two contexts. The first concerns projects that are funded jointly by OPRAF and other parties (for example, local authorities). Literal application of the ranking rule would result in total benefits being compared with the OPRAF share of total funding, thereby improperly favouring such schemes. (This fear of an inappropriate practice is not allayed by par. 3.6, which says merely that contributions from other budget holders will be taken into account in determining the FD's priorities, nor by the comments in Annex A of the *interim* planning criteria document, OPRAF, 1997.) In cases of joint funding, the comparison should be between benefits and the *total* public-sector funding, from whatever source. (This view is qualified below, to account for inter-party differences in valuations of some benefits; see section 7.)

In a second context, "The Franchising Director will seek to ensure that any reductions in services are gradual. Service enhancements and reductions will be treated asymmetrically, such that any changes financed from within his existing budget do not impose unreasonable disbenefits on particular groups or individuals." (OPRAF, 1999a, par. 5.11). The intent seems to be to support continuation of existing services even where the NPV/K ratio is lower than the test ratio for new services. Perhaps the aim is to avoid undue political turbulence.

But is there also an 'economic' justification? Bear in mind that decisions to use transport services are often taken in conjunction with other, long-term decisions. For example, someone may choose to buy a particular residential property because its location permits convenient use of a rail service that carries the individual to the place of work. In principle, a cost-benefit analysis should be sufficiently comprehensive and precise to identify and measure the loss incurred by such an individual if the rail service is closed. But if the practice is not as good as that, there may be solid ground for 'favouring' continuation of marginal services, relative to opening of new ones.

If, as seems likely, OPRAF intends to go beyond that argument, then there is an implicit challenge to the neo-classical framework. This deserves sympathetic consideration because some behavioural studies have uncovered an 'endowment effect': those who enjoy a service generally put a higher value on its loss than others will place on its acquisition (Rabin, 1998, p.14). This can be rationalised by supposing a kink in the utility function. Yet other behavioural studies suggest that, often, perceptions of outcomes are faulty and people adjust to loss more quickly than they expect (Rabin, 1998, p.34). This casts doubt on whether there *is* a robust utility function. Perhaps the moral for policy-making is that the choice of criterion will depend on the extent to which a government wishes to over-ride the delegation of value-formation that is embodied in the neo-classical framework.

7 Some policy issues

As part of its recasting of transport policy, the Government is to establish a Strategic Rail Authority (SRA). (Pending the passing of enabling legislation, the extant British Railways Board serves as an interim body.) The SRA is intended to address such major issues as the design of second-round franchises, the introduction of an increased level of on-track competition, and the creation of refined incentive mechanisms that produce ‘appropriate’ levels of track investment.

It should also play an important role in making policy concerning the network margins. When the intended legislation is in place, the SRA will take over the role of OPRAF and also the consumer-protection duties of ORR. The RR’s role in the closure procedure will also pass to the SRA. After reviewing closure proposals, the SRA will advise the Secretary of State, who will always be the final decision-maker (DETR, 1998, par. 38). Such simplification of the process is to be welcomed, even though decisions in contentious cases may turn more readily on political considerations. But arguably in this context it is the Minister who *should* be the final arbiter of where the public interest lies.

The above reference to ‘network margins’ reflects the point that closures and openings must be considered together, since both have an impact on the deployment of the limited pool of subsidy funds. The funding arrangements that have been in place since 1993 do not give due weight to this point. As already noted, however, the new OPRAF criteria can and should apply to both situations.

This section addresses the problems of mechanism design for both contexts. In acceptable cases, some form of financial support is merited; the mechanism must allow for this. It should also allow for the possibility of local-authority funding of local services. The discussion highlights five matters: the process for considering particular services; the need for a unified appraisal scheme applicable across all transport modes; the development of alternative service proposals; contract design; and decision-making when funding is shared.

The examination of individual services

As noted in section 3, each TOC franchise packaged a set of services – the PSR for the franchise. Given the hurried process of privatisation, such aggregation was probably unavoidable. And in the early years of privatisation, it is understandable that OPRAF should have devoted its limited staff resources to other issues such as trying to get the TOCs to run their trains on time.

Yet the institutional arrangements are flawed, since they do not secure testing of existing services to see whether the cost (under private-company operation) is small enough relative to the benefits, to justify financial support *for the individual service*. Because the Government’s rhetoric for improved rail services may out-run the Treasury’s willingness to provide funding (Glaister, 1998), it is especially important to compare the merits of existing and proposed non-commercial services, to permit evaluation of alternative subsidy patterns. For example, is it effective to continue to support a little-used service or would it be better to use the funds to support (say) the re-opening of a closed branch line or the introduction of more-frequent service on some other line?

Besides these economic arguments for directing subsidies to those contexts where they can yield the largest benefits, the duties and objectives set for the FD point in the same direction (OPRAF,

1998, Appendix 1). Further, the FD *can* alter a franchise, by negotiation with the TOC. In general the franchise agreements specify that in the event of a reduction in a PSR service, the franchise payment shall be altered so as to make the outcome revenue-neutral.

Accordingly there is a strong case for putting review arrangements in place as soon as possible, and certainly before the first-round franchises are re-negotiated or re-bid. Clearly, what is needed is a procedure that can be implemented without undue disruption of the other tasks of OPRAF and its successor. A sensible approach would be to institute a rough-and-ready evaluation of all individual passenger railway services, in order to identify those cases that may merit closer examination. This initial screening might involve ranking of each service by comparing an output measure (perhaps, passenger-km travelled per annum) with the annual direct costs of operation. If the information requirements of that approach are too onerous, however, then an alternative approach might simply deploy common knowledge within the industry to identify cases where use of (say) a branch-line service or a particular station may be too slight to justify the level of financial support.

In principle, the ranking of individual services should be done within a national framework. But some of the first-round franchises expire in 2003, and the review of these begins in January 2000. Accordingly, it may be expedient to examine first the services that are included in these franchises. As appraisal experience is gained, it may be possible not only to examine individual services as franchises are extended or re-assigned, but also to do so at intervals of (say) five years for those franchises of greater duration. (These arrangements would smooth out the administrative burden falling on the SRA. They would also give a TOC an incentive to do what it can to market a marginal service, and to lower the costs of supply – since the TOC would enjoy the consequent financial benefits until the time of the next review.)

Once a little-used service is identified, OPRAF could give it a full SCBA examination. It would thus be possible to judge whether the scope for introducing new services can be increased properly by withdrawing some old services and re-deploying the Government funding.

The importance of such a review is enhanced by the Government's intention to make available an additional £105 million (over a 3-year period, starting in the summer of 1999) for support of socially desirable but non-commercial new passenger services. This scheme is dubbed the Rail Passenger Partnership (RPP), the intended partners being mainly local authorities. (Funding may also be provided for strategic network investment for which Railtrack cannot find a commercial case.) For many non-commercial services, much of the benefit is enjoyed in the local area. Thus it seems appropriate to encourage local funding. Yet partnership is important because the financial resources available to local authorities are likely to be insufficient to allow them to take full responsibility.

The interest of local authorities in such partnerships will no doubt be stimulated by the Government's requirement that such authorities prepare Local Transport Plans (comprehensive reviews of transport services and needs, with a view to reducing car dependence and boosting the roles of public

transport). The economic appraisal of applications for RPP funds is to use the SCBA framework now established by OPRAF; see the guidance on bidding for RPP proposals (OPRAF, 1999b, par. 8.7).

The need for unified appraisal

In deciding whether or not to support a non-commercial rail service, there should be a careful comparison with schemes for the use of other modes, as alternative means to the same (transport) end. For this reason, evaluation should be made not merely under a SCBA framework, but by a scheme which may be, and is, applied without bias both to rail and to alternative modes such as bus and car.

To a greater extent than in the interim planning criteria (OPRAF, 1997), the 1999 scheme recognises this requirement. In particular, it refers to changes in externalities such as *road* congestion, noise and other environmental impacts that may follow from a *rail* decision (OPRAF, 1999a, pars. 6.11 and 6.29 to 6.31). Although OPRAF requires these effects to be identified, the conceptual framework seems not yet fully worked out. The agency itself notes that ongoing work on road appraisal methods may require adaptation of the OPRAF criteria to permit “full multi-modal studies in specific corridors or areas” (OPRAF, 1999a, par. 1.4).

Developing alternative proposals

The planning criteria give some recognition to network interdependence (OPRAF, 1999a, par. 5.4), but do not perhaps fully recognise the breadth of the range of strategies that may be used in devising alternative arrangements. Where a heavy-rail service is non-commercial, it is important to consider not merely the option of *replacing* it by another mode (usually bus), but also any opportunity there may be to change the manner of rail operation so as to reduce costs.

As the Government now recognises, integration of the various transport modes is also important. While the current campaign emphasises demand-side effects (easy interchange, and through ticketing, for example), integration of supply can also be a key to the creation of superior new arrangements. In this regard, Whitehouse (1998, p. 17) criticises the traditional British separation between heavy and light rail, and points out that in other countries, heavy-rail lines have been converted to light rail. (As already noted, in Britain, this *has* happened on occasion, as in Manchester.)

But integration can go further. From Germany comes the ‘Karlsruhe model’, in which the same tracks are used for both heavy and light vehicles (Denant-Boèmont and Mills, 1999). This approach is now planned in one British instance. The Tyne and Wear PTE is to extend its electrified Metro (light-rail) service to Sunderland. The plan (reported to be subject to final safety approval by the Railway Inspectorate) is to run over a Railtrack line that will still carry some heavy-rail diesel services of Northern Spirit (*Modern Railways*, February 1999, p. 78). Yet such integration is not planned in Nottingham, where a new light-rail service will run alongside part of the restored line to Mansfield (Table 2). In that section, each service will have a single track, though sharing the one right-of-way (*Tramways and Urban Transit*, January 1999, p. 4). This brings the extra costs of single-line working.

Contract design

It may be taken for granted that arrangements for the supply of non-commercial services should employ bidding for incentive contracts. However, there is room for deliberation as to how to do it.

In respect of the *provision of infrastructure*, there are concerns that the advent of the SRA will lead to the re-establishment of an old-style command economy, which suffers from the arbitrary dictates of politicians. Glaister (1998, pp. 24–25) expresses the hope that the funding of non-commercial assets will not be done through cross-subsidy, because that approach “would simply destroy the hard-won transparency that we now have”. Glaister also argues for creation of “a suitable income stream associated with the activity concerned”, in order to motivate commercial provision of infrastructure.

On the other hand, where the non-commercial service is the only use of the track in question, it may be better to fund the asset by direct capital grant. As well as avoiding arguments about the rate of return on capital to be paid to the shareholders of (for example) Railtrack, this should reduce the *funding* costs to the taxpayer. But it may be wise not to throw away those market forces that can lead to economical design of assets. Accordingly, the bidding might be for a ‘design and build’ contract for infrastructure that meets certain performance criteria, in the hope of thereby avoiding the worst of the gold-plating tendencies that can attend the creation of public-sector assets.

In the single-use context, the track might be owned by (say) a local authority. (This is recognised in OPRAF, 1999a, Annex A, par. 20.) In that context, the design-and-build contract might be given directly to a construction company, rather than through a holding company such as Railtrack. Of course, subsequent maintenance should also be contracted out.

In designing a contract for *operation of the service*, most would argue for delegation of the cost risk to the operator (though there may be disagreement about whether the operator itself should provide the rolling stock). The major issue is whether or not to delegate the revenue risk. Some of the alternative strategies are illustrated by the two examples already described (Table 2).

Experience with bus contracting in England has led some commentators to suggest that it is in the public interest for the public-sector agency to retain the revenue risk, because then small, risk-averse companies do enter bids, and the agency can secure a lower price (White, 1994). Of course, there are major differences between the bus and rail contexts. In many rail cases, there is only one ‘local’ TOC. As suggested by the examples in Table 2, that company is likely to be better placed than others to provide the non-commercial service at low cost (to itself), thanks to rail economies of scale and scope that probably exceed those available to bus operators. The Nottingham case provides an example of economies of scope: it was reported that some of the services were to be worked by drivers based in Norwich who “will be allocated a fill-in turn between Norwich trains arriving and departing at Nottingham” (*The Railway Magazine*, June 1998, p. 68). Compared with bus contracts, the local authority negotiator may find it more difficult to secure a good rail deal for the public sector.

But Whitehouse (p. 18) suggests that ‘micro-franchisees’ may be able to operate small railway services (such as a single branch line) and be willing to do so for a lower price than any existing TOC. In the light of the bus experience, this strengthens the case for using gross-cost contracts.

If the railway service is to be coordinated with other services so that travel passes may be used on all the local modes, there is a further argument for not delegating the revenue risk. Determination of fares, service levels, and advertising promotion then remain a public-sector responsibility; and the operating contract should contain effective penalty/bonus clauses to encourage satisfactory performance in respect of reliability, punctuality and (even) overcrowding.

For both investment and operation, then, it may be wise to have Government and local authorities retain ownership and responsibility wherever the decisions are going to be taken in the public sector anyway, and otherwise to use incentive contracts to obtain the benefits of commercial management.

Decision-making in partnership cases

Where financial support is to come from both Government and a local authority, the parties will need to negotiate the distribution of the funding cost. Furthermore, the local authority may wish to apply weights (especially for user benefit and external effects) that differ from the standard weights deployed in the (national) SCBA. If devolution of government is to be taken seriously, this (mild) departure from neo-classical economics need not be condemned in principle.

If the local authority places a lower total net value in a service, then it may decline to fund. If the local valuation is higher, then it is the SRA that may be unenthusiastic about making a contribution. One practical difficulty is that each party may engage in strategic manoeuvring, in an attempt to transfer the funding burden to the other. This may be of particular concern to local authorities whenever the SRA proposes withdrawal of an existing local service. (However, the use of a standard SCBA framework may limit this problem to the issue of funding, as distinct from that of appraisal.)

A practicable and (perhaps) reasonable outcome might be the adoption of a rule whereby the local-authority funding share is raised above the average when that authority places a higher-than-standard total net value upon the service in question. Such an arrangement could provide desirable incentives for the local authority.

8 Conclusions

In sharp contrast to the 1960s campaign of closures and retrenchment, recent Government policy and rail-industry thinking emphasises the need to expand network capacity and the desirability of restoring service to some disused routes. Indeed, since the privatisation legislation of 1993, there have been almost no significant closures.

The intrinsic appraisal difficulties noted in 1960 are still present. But since that time, the methods of evaluation have been developed so as to address many of the problems. In particular, the SCBA

framework announced by OPRAF in May 1999 is a major step forward, building as it does on the transparency provisions and some other features of the 1993 privatisation legislation.

However, some doubts remain. Problems in the allocation of joint costs may have been transformed into difficulties facing public-sector negotiators who must bargain in the face of incomplete information. Further, the SCBA framework needs to be extended to facilitate multi-modal studies.

Also needing improvement is the process for thinking out alternative proposals. Institutional barriers and traditional attitudes must not be allowed to impede inter-modal integration. And alongside the present emphasis on provision of extra services, it is important to review the worth of the currently provided marginal services, a task that was neglected in the hurried process of privatisation.

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CVs for authors
of
‘Appraisal of non-commercial passenger rail services in Britain’

Gordon Mills

Gordon Mills graduated in the University of Cambridge in 1955. After posts at the Universities of Sheffield, Bristol and Kent at Canterbury, he became Professor of Economics in the University of Sydney in 1976 and Director of the Centre for Microeconomic Policy Analysis there in 1989. He has served as Visiting Professor of Economics at the University of Virginia, and has been a visiting scholar in various institutions in England, the USA and France.

His recent work includes studies in consumer economics as well as transport economics.

Martin Howe

Martin Howe graduated at the University of Leeds in 1957 and obtained his PhD from the University of Sheffield in 1961. After lecturing posts in economics at the Universities of Sheffield and Manchester, he joined the Monopolies and Mergers Commission as its Senior Economic Adviser in 1973. He moved to the Office of Fair Trading in 1977 and became its Director of Competition Policy in 1984.

Since retirement from the Civil Service, Dr Howe has served in various advisory and consultancy capacities on competition policy and regulatory issues. He is an associate of Europe Economics.