THE NATURE OF THE PROBLEM

The railways emerged from the war at a fairly high level of activity, but in a poor physical state. They were able to pay their way, because road transport facilities were still limited, and they continued to do so until 1952. From then onwards, however, the surplus on operating account declined progressively. After 1953 it became too small to meet capital charges, after 1955 it disappeared, and by 1960 the annual loss on operating account had risen to £67.7 m. This rose further to £86.9 m. in 1961.

In, 1955, a modernisation plan was embarked upon. It was a plan to modernise equipment, but it did not envisage any basic changes in the scope of railway services or in the general mode of operation of the railway system. It was expected that the substitution of electric and diesel haulage for steam, concentration of marshalling yards, reduction in number and increased mechanisation of goods depots, re-signalling, and the introduction of other modem equipment, would make the railways pay by reducing costs and attracting more traffic.

By 1960, however, it had become apparent that the effects of modernisation were neither so rapid nor so pronounced as had been forecast, that the downward trend in some railway traffics would persist, and the operating losses were likely to go on increasing unless radical changes were made.

There is a considerable scope for cost reduction by a multiplicity of economies over the whole field of railway operations, and vigorous efforts are being made to achieve them. Nevertheless, it was obvious, even before detailed investigation started, that neither modernisation nor more economical working could make the railways viable in their existing form, and that a reshaping of the whole pattern of the business would be necessary as well.

Ever since major amalgamations started, the business of the railways has been, from a financial point of view, a mixture of good, bad, and indifferent routes, services and traffics. Nevertheless, the circumstances which obtained throughout the major period of railway history in Britain—conditions of near monopoly, obligation to carry, and statutory fixing of rates without relationship to costs—all tended to cause accountancy to be limited to global accounts for each of the independent railway companies. As the companies merged, the accounting units became larger without an offsetting increase in detail, and this continued to be the position when all the railways were combined by nationalisation. While these conditions existed, and while the railways were able to make a profit on their business as a whole, the unknown degree of cross-subsidisation involved in carrying bad traffic on the back of financially good traffic was very largely ignored. Now, however, after the post-war growth of competition from road transport, it is no longer socially necessary for the railways to cover such a preponderant part of the total variety of internal transport services as they did in the past, and it is certainly not possible for them to operate profitably if they do so.

Road competition has forced down rates on good railway traffics to the point where they are quite incapable of subsidising the very costly provision of services to handle poor rail traffics. Even worse, the burdening of good traffics with costs arising from bad ones has led to the transfer to road of a considerable volume of traffic which railways are better able to handle, in order to preserve on rail traffics which could be handled better by road.

It is this situation which necessitates a much more analytical examination of the Railways' business with a view to reshaping their system, their mode of operation, and their pattern of services and traffics.

ANALYSIS OF THE PROBLEM

The logical approach to the problem of shaping, or reshaping a railway system is: —

(i) to determine the basic characteristics which distinguish railways as a mode of transport;

(ii) to determine under what conditions these characteristics enable railways to be the best available form of transport;

(iii) to determine to which parts of the total national pattern of transport requirements these conditions apply;

(iv) to shape the railway route system and services so as to take advantage of favourable circumstances wherever they exist.

Unfortunately, simple as this sequence appears, there is no single or simple way of accumulating and presenting information which enables it to be followed in quantitative terms. It is, nevertheless, a very useful beginning to consider, even in general terms, what are the basic characteristics of railways and under what circumstances these characteristics are likely to make railways the **best** available form of transport.

Railways are distinguished by the provision and maintenance of a specialised route system for their own exclusive use. This gives rise to high fixed costs. On the other hand, the benefits which can be derived from possession of this high cost route system are very great.

Firstly, it permits the running of high capacity trains, which themselves have very low movement costs per unit carried. Secondly, it permits dense flows of traffic and, provided the flows are dense, the fixed costs per unit moved are also low. Thirdly, it permits safe, reliable, scheduled movements at high speed. In a national system of transport we should, therefore, expect to find railways concentrating upon those parts of the traffic pattern which enable them *to* derive sufficient benefit from these three advantages to offset their unavoidable burden of high system cost. In other words, we should expect the provision of railways to be limited to routes over which it is possible to develop dense flows of traffic, of the kinds which lend themselves to movement in trainload quantities and which, in part at least, benefit from the speed and reliability which the railways are capable of achieving. Moreover, we should expect that, having been concentrated upon traffics matched to the advantageous features of rail transport, the system would then be operated so as to develop those features to the full.

In all that follows, we shall seek to show, as quantitatively as possible, how far the system departs from this condition at present, and to decide what changes are necessary to put matters right. To this end, a first step is a detailed examination of the existing rail system, its pattern of traffic, and its mode of operation.