Measuring Railway Productivity in Ireland: A Comment

SEAN D. BARRETT
Trinity College, Dublin

I INTRODUCTION

The McGeehan (1995) article has three sections. They deal respectively with railway labour productivity, overall railway productivity, and a methodology which is claimed to indicate that the total productivity of CIE railways increased by up to 77.4 per cent between 1985 and 1992. I wish to contest his claims under each of these headings.

(a) Railway Labour Productivity

The traffic unit per staff member figure is the standard one used to measure railway labour productivity. The data are reported by railway companies to national governments and by them to international bodies such as the European Conference of Ministers of Transport (ECMT).

The Minister for Tourism, Transport and Communications in the Dáil on 3 March, 1992 in a debate on the national rail network stated that "productivity and output per employee has increased by 10 per cent since 1987". The Operational Programme for Transport 1994-1999 (November 1994, p. 21), jointly published by the Irish Government and the European Commission, shows the growth of traffic units per staff over the years 1970 to 1992 on Irish railways. The growth between 1980 and 1990 was from 219 to 331 traffic units per staff member.

At international level, the ECMT data for 1989 are the latest available
They indicate an average of 481 traffic units per staff member for nineteen railways. That is some 45 per cent above the CIE figure. By the end of the decade CIE had not improved its productivity problem relative to other European railways, from the performance in Table 1 (McGeehan, 1995).

A full reproduction of the Barrett table by McGeehan would have included the information in the original table that it was based on data produced by the European Conference of Ministers of Transport. When, therefore, McGeehan refers to “the principal defect in Barrett’s approach ...”, he is, in fact, in disagreement with the data published by his employer, all other railways and their national authorities, and the European Conference of Ministers of Transport. In his dispute with his industry’s productivity data I share the majority view. Using international data on railways involves no more risks than using any other data. McGeehan may well believe that “it has been shown, (presumably, by himself) that cross-sectional comparisons are meaningless because of the qualifications and caveats inherent in their measurement” but he has yet to influence the data published by his industry.

(b) **Total Railway Factor Productivity**

McGeehan states that “researchers are now moving away from the partial measures, utilised by Barrett, towards measures which include total output and total input”. With due respects to Mr McGeehan, I refer him to pages 118-120 of Barrett (1991) for an examination of the total cost and seven categories of cost, of the CIE railway performance during the years 1983-1988. The target set by the government was “to reduce overall rail costs by close to one-fifth over five years”, but the reduction achieved was only 6 per cent. Barrett shows that in only two cost categories, fuel and renewal of lines and works, was the target attained. The target was not met under the remaining five cost categories. These were, financial charges, operating depreciation, maintenance of rolling stock, maintenance of lines and works, and other operating expenses. The two input cost categories in which the cost reduction programme targets were achieved accounted for 22 per cent of total railway costs compared to 78 per cent of the cost in the five input cost categories where the productivity targets were not achieved (Barrett, 1991, Table 56, p. 120).

Neither during the period of operation of the government’s overall productivity targets for CIE for 1983-1988, nor at the end of the programme, was any analysis made in the CIE Annual Reports of the attainment, or otherwise, of the targets. The current CIE interest in overall railway productivity comes three years after the Barrett examination of the 1983-1988 performance and eleven years after the government set the overall
productivity targets. The sentence from McGeehan cited at the start of this section should therefore read that “CIE researchers are now moving away from partial measures towards measures which include total output and total input as stipulated by the government for the years 1983-88 and analysed by Barrett (1991)".

(c) The Claimed Increase of 77 Per Cent in Total Irish Rail Productivity

McGeehan claims that Irish railways increased their total factor productivity between 1985 and 1992 by between 77.4 per cent and 69.9 per cent, depending on the definitions of total factor productivity used. While he does not show the data to support these claims, they can be tested by reference to the cost data of Irish Rail published in its Annual Reports.

The CIE Annual Reports show that the output of Irish Rail increased from 1,624 to 1,859 thousand units between 1985 and 1992, an increase of 14 per cent. The 1985 cost was £160.8m and a 14 per cent increase would have brought the cost to £183.3m at 1985 prices for the 1992 volumes. Adjusting the 1985 prices by the 25 per cent increase in retail prices between 1985 and 1992 gives an expected cost of 1992 railway output of £229.1m at 1992 prices. The actual cost was £179.7m, or 78 per cent of the expected cost. The productivity increase was therefore 22 per cent and the value of this productivity increase was £49.4m. The claimed 77.4 per cent increase in total railway factor productivity between 1985 and 1992 would have reduced the expected railway cost of £229.1m in 1992 by some £177.3m to £51.8m. With railway revenues of £81.8m there would have been a profit of £30m compared to a deficit of £97.9m shown in the CIE accounts.

A total productivity increase of the claimed magnitude would have been a considerable boost to the railway finances but the evidence from the CIE accounts is that it did not occur.

REFERENCES

BARRETT, SEAN D., 1991. Transport Policy in Ireland in the 1990s, Dublin: Gill and Macmillan. (In the above discussion readers are referred to the footnote to Table 57 and pp. 118-120).