

## Own price elasticity of demand for bus and rail

1. As noted in paragraph 4.2, there is a vast and complex array of evidence on price elasticity of demand available for different modes of transport.
2. We commissioned a study from OXERA summarizing available studies on bus and rail elasticities (the results of which were published on our web site). The OXERA study showed that short-term bus usage elasticities in the UK as a whole were generally estimated to be in the range  $-0.35$  to  $-0.5$ , but with long-run elasticities approaching  $-1$ ; short-run rail usage elasticities were in the range of  $-0.5$  to  $-0.7$ , and long-run elasticities were also approaching  $-1$ . OXERA also noted that there was some evidence that bus market elasticities and long-run rail elasticities were higher in Scotland than the national average. On the basis of the short-run elasticities, therefore, an increase in fares in either market would lead to a less than proportionate reduction in demand in that market and increase the revenues of bus or rail operators respectively; even on the basis of long-run elasticities approaching  $-1$ , although the increase in fares may result in a proportionate reduction in volume, and little or no change in revenue, it would still be profitable to increase fares if the reduction in demand led to cost savings. Price elasticities may well, however, differ between particular local areas depending on their circumstances, by purpose of travel, and by characteristics of passengers (concessionary bus passengers, for example, travel free in Scotland). The OXERA study, for example, showed that fare elasticities (for the UK as a whole) for both buses and rail are higher in off-peak than in peak periods, and for leisure travel than for commuting.
3. There is little doubt, on the basis of UK evidence, that in the short term, own price elasticities of both bus and rail are significantly below one and that the SSNIP test (see paragraph 4.1) both for the use of bus and for the use of rail transport separately is clearly satisfied. That conclusion would also apply on the basis of longer-term elasticities.
4. A large number of parties commented to us that they did not regard it as appropriate to consider bus or rail or public transport in general in isolation from private transport. Clearly, considerable efforts are being made in some parts of the UK to attract passengers from private to public transport, to reduce congestion and for environmental reasons. This includes consideration of investment in trams and the introduction of congestion charging in Edinburgh, which is subject to a possible referendum in that city. Elsewhere in the UK, increased subsidies to operation of bus services have been seen as a further means of attracting passengers on to public transport. Within the areas we are studying, moreover, improved facilities for 'park and ride schemes', ie provision of free car parking at railway stations, has itself been intended to attract passengers from car to rail services.
5. We have noted above, however, that the own price elasticities of both bus and rail at least in the short term are significantly below one. Hence, the extent of competition from car (together with the extent to which, if prices increased or services decreased, passengers would stop travelling altogether) is insufficient to constrain fare increases or any reductions in service levels. Second, and confirming this limited degree of substitutability, previous trends in fares of public transport have differed significantly from those in the costs of using car. Over the past 20 years, for example, bus fares have increased in real terms by some 40 per cent, whereas the inflation-adjusted cost of using private car has been broadly unchanged, also suggesting that the cost

of using private car has imposed little competitive constraint on changes in bus fares. In this period, we have seen a shift in demand from public to private transport, but (as shown in the low own price elasticities of bus and rail) to a large extent this may reflect other factors, in particular the extent to which rising real incomes increase car ownership and usage. Despite the shift from public to private transport, the operation of bus services has generally remained profitable. Third, a large number of users of public transport do not have access to a car, or there are problems in parking at their destinations. In 2001, 56 per cent of households in the city of Glasgow (for example) did not own a car, among the highest figures in the UK. Our passenger survey also suggested that 50 to 60 per cent of bus users and 30 to 40 per cent of rail users in Glasgow, Edinburgh and Falkirk did not have access to a car. A further 16 to 18 per cent of bus users and 30 to 33 per cent of rail users did not use a car for their most recent journey by public transport because of lack of car parking or the expense of parking at their destination.