

# **Examining the Influence of Socio-demographic Change on Rail Demand**

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## **Abstract**

Britain's railways are experiencing relatively good times with demand growing at six percent per year and annual demand reaching a 50 year high at 1.15 billion trips. Much of this growth can be attributed to improvements in rail service quality and safety but a significant portion is due to a period of sustained economic growth, leading to higher incomes, higher levels of employment and increased levels of road congestion. If such trends continue, the railways will be faced with an increasingly difficult task of planning investment and setting fares to manage demand.

In this paper we aim to provide an insight into the future long term performance of Britain's railways taking specific account of the influence of changing socio-demographic and economic patterns on demand. To this end we describe the specification of a spatially oriented demand model showing the relationship between the volume of rail demand and rail fares, rail service quality, the strength of cross-modal competition and the socio-demographic characteristics of station catchment areas. The parameters for this model are drawn from existing industry evidence (ATOC, 2005) together with evidence from research presented at the 2005 European Transport Conference (Whelan, Wardman and Lythgoe, 2005). The model is applied to the top 4,000 rail flows by volume and shows how demand forecasts are influenced by different assumptions regarding detailed estimates of population, employment, car ownership and income growth to the year 2031. Although the forecast are wide-ranging, the overall picture for rail demand is very positive.

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