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Searching for the Rail Bonus

Results from a panel SP/RP study

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Abstract

The inherent superiority of rail-based public transport options over bus-based alternative, all other things being equal, has been stipulated in the literature and in the public policy discussion for some time. The exact strength of any such rail bonus is important to a public transport operator which has to consider the replacement of rail-based services by bus services. The public transport operator of the city of Dresden (DVB), while generally upgrading its services, has to consider this option, in particular where the continuing tram operation would require a costly rehabilitation of the tracks.

The measurement of any such systematic preference for rail-based modes is difficult, as it requires either a before-and-after study of such a switch, controlled for the other relevant service attributes, e.g. frequency, speed, reliability, price, route, etc., or a study of a network, in which rail- and road-based modes offer comparable types of services, with bus services in particular not restricted to feeder services to rail/tram lines. Both are rare for obvious reasons.

A recent service change of the DVB offered the opportunity to look at the issue in detail. A series of surveys were undertaken for this purpose before and after:

- * A one-day travel diary (including a household questionnaire)
- * A survey of the image of the services
- * A between-mode stated preference exercise focusing on the choice between public transport and private motorised transport where public transport was provided by either bus or tram (7 choice situations)
- * A within-mode stated preference exercise looking at the trade-offs between public transport modes, in particular levels of comfort, travel times and transfers (7 choice situations)

The paper reports detailed results from this study addressing the differences in preferences between the waves (effects of familiarity with an alternative) from both separate and joint stated preference and stated preference/revealed preference models. The modelling so far indicates a consistent, but weak preference for the rail option through a higher value-of-time for rail usage, higher valuation of new rail vehicles in comparison to new busses, although they are partially balanced by a higher transfer penalty.

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