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Book Review: Stephen Ison and Tom Rye (eds.): The Implementation and Effectiveness of Transport Demand Management Measures; an International Perspective

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The growing difficulties with managing congestion in road traffic have steadily increased attention for transport management approaches that focus on reducing the need for travelling and switching modes to alternative mobility options. The set of measures available to transport professionals for bringing about such a change in travel behaviour constitutes the domain of Transport Demand Management (TDM). This book deals with TDM, in particular those measures that associate with commuting-induced road congestion. "The book seeks to review the nature of particular TDM measures, their effectiveness and issues relating to implementation and how the barriers to the implementation of the respective measures may be overcome" (p. 2). Especially the special attention for issues of implementation is interesting, since all too often transport planners tend to mainly emphasize effectiveness of interventions in the transport system, while neglecting the difficulties involved with bringing proposed interventions to reality.

After an introductory chapter, the book discusses a selection of topics in TDM in eleven additional chapters by different authors. The selection of topics is not an exhaustive coverage of all TDM measures. A choice is made for a set of topics mainly with a more economic flavour: (a) purchase, circulation and fuel taxation measures, (b) road use charging and the role of ITS in that context, (c) congestion charging and the impact on land use, (d) the (economics of) parking policies, including P&R, (e) the potential role of tradable permits, also in relation to ITS, (f) public transport subsidisation. In addition some other topics, seemingly unrelated to the previous ones, are discussed: (g) the substitution of communication for travel and (h) the role of travel plans. As such, this selection presents a wide range of interesting TDM approaches. The choice of topics is not explicitly motivated in the book from a transport systems view on how these topics can be systematically linked to TDM packages at different functional layers of the transport system (such as the mobility market, transport market and traffic market) and the potential size of impact on changes in behaviour. Nor do these topics basically face more problems with implementing them than certain other approaches. At least this gives room to address other interesting TDM topics in a next book on TDM, such as e.g. rewarding car-drivers for travelling in non-peak hours, or policies aimed at increasing bicycle use, or the offering of attractive multi-modal travel services, or the implementation of car-sharing concepts, or logistical innovations aimed at freight transport prevention and/or switches to multi-modal freight transport.

The various chapters have in common that they present an extended introduction in the chosen topic, discuss the relevant theoretical background and what is known about potential and (in case

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such data exist) measured effects, and elaborate on known or expected barriers for implementation. The result is a valuable overview that clearly illustrates the complexity of the TDM domain: the involvement of a variety of (public and private) stakeholders with diverging goals and interests and, consequently, different views on acceptability of certain measures, the confrontation with non-harmonized institutions (e.g. different organizations involved for permitting or control in parking management, conflicting regulations on privacy versus the need for travel registration, conflicting taxation incentives), considerable uncertainties about e.g. the size of effects, the costs and reliability of enabling technology (e.g. necessary ICT facilities) or the behavioural changes. Moreover, certain topics are subjects of political – ideological debate, hindering decisions to be made and necessary effects to be realized.

The ideological debate is in particular strong with regard to the topic of pricing, perhaps one of the reasons why this book pays quite some attention to road pricing, pricing of parking facilities, subsidisation of public transport and fuel taxation. For instance, Ken Button and Henry Vega give an overview of the debate on road pricing addressing issues on generic or selective (for certain parts of the network) pricing, the transaction costs of pricing systems, the issue of socio-economic benefits for society or social justice with regard to different traveller segments (“right to mobility”) and the distribution of the revenues (back into the road network or alternatively invest in alternatives, such as public transport?). John Preston systematically discusses the arguments pro and contra subsidisation of public transport, illustrating these with data on Great Britain and London. Although in that context best practices and clear effects of subsidised public transport can be identified, Preston notices that further increases of subsidies in the “commercially minded Great Britain public transport” are deemed politically unacceptable. Another (amusing) example of the dominance of ideology in relation to pricing policy is presented by Donald Shoup, discussing the parking policy at the campus of UCLA, California. The price of parking at UCLA is well below the costs of new parking facilities. UCLA has 175 different types of permits, mainly based on the (academic) hierarchy of staff, students and visitors; there is not a market accepting a price-based regulation of demand and supply. The policy results in an excess demand for permits, a lively trade of permits based on cheating and hidden agendas, a lot of bureaucracy and annually high cost for the university.

Another source of implementation uncertainty popping up at various places in the book is related to the issue of impact on travel behaviour. One example is the overview presented by Glenn Lyons, Sandy Farag and Hebba Haddad on the travel substitution effects of communication technology. Does the well-known notion of the ‘death of distance’ due to the growing opportunities for telecommunication become reality? The authors are basically positive about the substitution effect, but also state that in particular social aspects (physical contacts, travel habits, cultural norms for presence, and the like) seem to be very dominant on travel behaviour. So, although technology enables more substitution, and consequently should be treated as a mode of access, the behavioural impacts are far from clear. Another example of uncertain behavioural impacts offers the contribution by David Banister discussing the effects of congestion charging (more particular the concept of a fixed cordon around the central area of a city) on local economy and land use. Evidently, these impacts are the results of changes in behaviour of travellers and local entrepreneurs. Intentions to introduce such congestion charging policies are generally strongly opposed by the commercial sector using arguments of significant deterioration of access and loss of economy. Banister presents the effects of such pricing in London and concludes that the effects on modal shift and improved environmental quality have been wider than expected. The growth rates of financial and most commercial sectors appear to have been maintained. And, although retailers and hotel and restaurant sectors were to some degree affected, they still in majority are in favour of the congestion pricing. This example again illustrates the mechanism of relatively fast behavioural adaptation of travellers we have seen before and the fact that long term land use change processes, based on other motives than accessibility, are more dominant.

Throughout the book, it is repeatedly stressed that any particular measure cannot be viewed as a standalone measure. The message is: think in terms of combinations and effective packages of measures. The problems of the functioning of the transport system are too complex to be solved by one-dimensional intervention approaches. It is from that perspective worrying to observe that policy practices often incrementally focus too strongly on one-dimensional solutions (the introduction of a new rail line or the extension of a local road capacity or the construction of a new parking facility) and insufficiently express the desire to discuss strategic functional linkages between different measures and the joined effects of strategic packages. But are these politicians to blame? Perhaps we, as transport engineers and planners, too often provide these policy makers with very fragmented insights in effects of different measures and certainly give them too limited support to overcome the inevitable barriers for implementation. From that perspective this book contributes to the strengthening of our professional insight in the complexity of transport planning.