Evaluation of Programmes Promoting Voluntary Change in Travel Behaviour

Editorial by Kiron Chatterjee and Peter Bonsall

The phrase “Voluntary Travel Behaviour Change (VTBC)” encompasses a range of programmes including personal travel planning, travel awareness campaigns, workplace travel plans, school travel plans and car sharing schemes. Specific applications of VTBC are often branded with local or proprietary names such as “Local Motion” or “Individual Travel Marketing” and different terminology is used to describe the concept in different countries (for example, “TravelSmart in Australia and “Smarter Choices” in the UK). VTBC measures differ in detail and focus but share the central idea that, given appropriate information, assistance, motivation or incentives, people will voluntarily choose to travel in ways which can benefit themselves, the community and the environment.

VTBC programmes are becoming increasingly prominent among the policy options for achieving more sustainable travel choices. Following the publication of impressive results from early projects, substantial funds have been invested in VTBC programmes in Australia, the UK and elsewhere. However, there is some debate among professionals and academics as to how much can be inferred from the published results. Expert reviews have identified the need to obtain more robust evidence on the impact of VTBC programmes in order to compare their costs and benefits with those of other options, and to identify the factors determining the impact of different programmes. Emphasising this point, the Fifth Smarter Choices Conference held in London in March 2009 was titled ‘From leap of faith to business case’ and discussed whether adequate evidence had yet been obtained and whether robust business cases had been prepared for the value for money of VTBC projects.

Although a number of thoughtful reviews have appeared in the “grey” literature (for example, AGO, 2005; Cairns et al, 2004), they have been scattered in time and place and we think it timely to bring a number of key arguments together in one issue of the most relevant journal. In so doing we provide a forum for the presentation of different perspectives and opinions on this important topic in a way that is relevant not only for the evaluation of VTBC programmes but also to that of other low cost transport policy options measures (e.g. walking and cycling schemes).

This Special Issue includes papers which address three key questions. Firstly, what can safely be concluded from the existing evidence on the effectiveness and value for money of VTBC programmes? Secondly, what evaluation methods and procedures are required to achieve more robust results? Thirdly, could the evaluation of VTBC projects contribute more to the understanding of travel behaviour change and thus facilitate more effective design of future applications of the VTBC concept?

The paper by Brögel et al provides a review of worldwide experience with Individual Travel Marketing (a form of personal travel planning) and reflects on the use of a particular travel survey method (Kontiv) to evaluate its effectiveness as part of a design involving control populations and repeat surveys. A particular concern in survey-based evaluations is bias in measured indicators due to non-response and the paper provides evidence on the severity of this (both for independent samples
and panel samples) and outlines how the authors have addressed this in their survey methodology. The authors emphasise that evaluations are now moving towards an integrated approach where information is collected not only on behavioural indicators but also marketing indicators and external aggregate indicators. They acknowledge that there are challenges in defining appropriate external data to evaluate Individual Travel Marketing projects and that experience with this type of data is limited at the current time. The authors conclude that the number of projects evaluated and the consistency of evidence now available points quite clearly to the success of Individual Travel Marketing in achieving behavioural change.

Chatterjee’s paper outlines the requirements for a robust and useful evaluation and provides a critical evaluation of evidence from major projects in England. The author concludes that the evidence base is incomplete and that, where the aim is to establish impacts, more attention needs to be paid to statistical requirements and greater use should be made of aggregate data to supplement individual behavioural data and allow longer term effects to be monitored. The author also calls for a greater emphasis on the qualitative study of behavioural change among different groups of the population to increase understanding of how the design elements of individual projects influence behavioural outcomes.

Bonsall’s paper draws on published literature and the author’s own experience as evaluation auditor. It outlines the emergence of personal travel planning as a popular transport policy instrument and reports the differing opinions on the robustness of the evidence base. It draws particular attention to problems such as social desirability bias, difficulty in defining the counterfactual, inadequate documentation of evaluation methods and the paucity of independent evidence on project performance. It concludes that these problems cast doubt on the robustness of many previous evaluations.

The paper by Stopher et al provides particular detail on three problems encountered when using travel surveys to evaluate VTBC projects; achieving adequate sample sizes, obtaining complete travel records, and establishing the counterfactual. They suggest that these problems can be reduced by using panels and automatic monitoring of vehicle use over extended periods and by using non-participant households in project areas as a comparator group. Three Australian case studies are described in which the use of panels, odometer readings, and GPS logs were important components of the evaluation package. The authors conclude that GPS logs, in particular, are likely to make a particularly valuable new contribution.

Seethaler and Rose provide a detailed examination of the use of odometer readings as a source of data for VTBC evaluations. They present a case study in which a TravelSmart initiative in Melbourne is evaluated using a panel survey, incorporating week-long odometer readings. They conclude that sample selection bias, instrument reactivity and regression-to-the-mean are very likely to bias the evaluation results. They therefore recommend that special efforts are made in surveys to include different groups in the population and to obtain socio-demographic information on survey non-respondents.

Thøgersen’s paper demonstrates, in the context of a public transport promotion campaign in Copenhagen involving provision of free travel cards, how insights into
the influences on behavioural change can be obtained by seeking evidence on theoretically derived behavioural constructs from project participants and a comparison group. It is suggested that this approach to evaluation, though unable to provide a robust indication of measurable impacts or value for money, can help to inform the design of future interventions.

The short paper by Cohen argues, from the point of view of practitioner, that the practical difficulties of obtaining robust evidence have been insufficiently recognised and need to be more widely understood by sponsors and academics. He recommends that, since these problems are insurmountable within realistic budgets, greater emphasis should be placed on qualitative data on behavioural change along with aggregate data on changes in travel behaviour.

Although these seven papers agree on a number of important points, most notably on the desirability of using a variety of data sources to evaluate effectiveness, the importance of having some indication of the counterfactual and the difficulties involved in achieving adequate sample sizes, they differ as to what can be concluded about the success of past VTBC programmes and about the most appropriate way forward. Compare, for example, Brög et al's confidence that the effectiveness of Individual Travel Marketing is established beyond reasonable doubt with the worry, expressed by Bonsall, that past evaluations may have been systematically biased. Or compare Stopher et al's confidence that it is possible to overcome attrition and conditioning effects in panel surveys and to get an indication of the counterfactual from a choice-based control group, with the more sceptical stance on these issues by Brög et al and by Bonsall.

Other differences between the papers reflect the range of objectives which, as noted by Chatterjee, may exist for a VTBC evaluation. For example, compare the attempts by Stopher et al, and by Seethaler and Rose, to find more robust ways of estimating the behavioural change attributable to VTBC with Cohen's emphasis on finding ways to understand which aspects of a programme work well, or Thøgersen's interest in understanding the underlying behavioural processes.

As editors of this Special Issue, we hope that this collection of papers throws more light on an important area of work which is of great significance for the future direction of transport policy.

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