

## EDITORIAL

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This Special Issue on “Some recent advances in transportation studies” is the first issue of an international journal -- *Transportmetrica*. The objectives of the journal are to provide a discussion forum for transportation studies, and exchange of new and innovative ideas in transportation research. It publishes high-quality internationally refereed papers with a focus on quantitative analysis and studies. Policy and descriptive papers with arguments supported by transportation statistics and data are also within the scope of the journal. This Special Issue is a collection of advanced papers presented at the Eighth Conference of the Hong Kong Society for Transportation Studies (HKSTS) held on 12<sup>th</sup> December, 2003. These selected papers cover the important themes of road safety, travel behaviour, network improvements and origin-destination trip table estimation.

The first paper by Allsop systematically compares the patterns of casualties in road traffic accidents involving goods vehicles in Britain and Hong Kong in 2000/2001. The topic is high importance in road safety research. Although the accident involvement rate of goods vehicles was broadly similar to all other motor vehicles in both cases, the number of casualties per accident was systematically higher for goods vehicles. Moreover, accidents involving goods vehicles resulted in more casualties to other kinds of road users than to users of the goods vehicles. The average severities of casualties in accidents involving medium and heavy goods vehicles were also higher. Against this background, a list of measures, including the fitting of crushable ends to medium and heavy goods vehicles, is suggested.

The second paper by Arentze and Timmermans focuses on the important topic of forecasting transport demand through the activity-based approaches. The paper reviews three types of transport demand models: models under assumptions of static knowledge, models under assumptions of learning and models under the assumptions of learning and uncertainty. Many recent progresses in modeling have been discussed. In particular, the paper carefully traces and develops a theoretical framework on the dynamics of activity-travel choice behaviour under learning and uncertainty. The theoretical framework provides a solid base for numerical and empirical studies in the future.

The third paper by Kitamura and Susilo examines the stability in travel over time. Using repeated cross-sectional data from the Kyoto-Osaka-Kobe metropolitan area of Japan in 1980, 1990 and 2000, the paper finds that activity engagement and travel have increased, rather than remained stable, over time. Changes in the structural relationship of travel, rather than changes in the socio-demographic and other contributing factors, were the major causes for the expansion in activity engagement and travel. Their findings are in sharp contrast to the studies reporting stability in travel over time.

The fourth paper by Szeto and Lo won the HKSTS Outstanding Student Paper Award 2003. Szeto and Lo consider three strategies of planning road network improvements over time. These strategies, namely government-as-the-provider, monopoly market and competitive market, are proven to have different financial and social implications. The

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sensitivity analysis highlights the ability of the competitive market strategy in maintaining a good balance between total discounted consumer surplus and profitability under uncertain value of time and potential demand. Their findings are of high relevance to the policy makers in formulating strategies to develop transport infrastructure.

The last paper by Chootinan, Chen and Yang considers the problem of determining the number and locations of traffic counting stations in estimating the origin-destination trip table estimation. The conflicting objectives of maximal coverage (quality) and minimal resource utilization (cost) are simultaneously considered in a bi-objective traffic counting location problem. Then, the multi-objective optimization technique of genetic algorithm is used to explore a set of non-dominated solutions. The fitness of each solution is compared using the generating and the preference-based approaches. With the use of numerical examples, Chootinan, Chan and Yang further illustrate the results of the weighted-sum and distance-based genetic algorithm methods. Their findings indicate that the latter could provide a better picture of the quality-cost tradeoff. Nonetheless, the need to maintain the diversity of solutions is important to the good performance of the distance-based method.

We sincerely hope that the readers would find the selected papers in this Special Issue of high theoretical and practical significance. Lastly, we would like to thank all the Conference participants who have submitted their revised papers for consideration of publication and all the referees for reviewing and commenting on the submissions.