

# 1 Setting the context

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*9.50 am Sunday morning 16<sup>th</sup> September 2018. This introductory chapter is being written while the first author is sitting in a Hong Kong hotel lobby, Super Typhoon Mangkhut raging outside. This has just been upgraded to Category 10 level, which shuts the city down; the most powerful storm in the world in 2018, thus far. All flights are cancelled but, hopefully, the flight back home in 34 hours' time will be OK. No-one is using the swimming pool! There was the odd taxi on the road but not any longer, as the storm peak approaches.*

In September 2018 the first author appeared as an expert witness for the Independent Review Committee on Hong Kong Franchised Bus Services. The Committee, set up by the Chief Executive of the Hong Kong Special Administrative Region of the People's Republic of China, is undertaking a safety inquiry, following a bus accident earlier in 2018, which resulted in multiple fatalities. The major focus of evidence presented by the first author was about establishing a robust governance framework focussed on safety risk management, working from legislation through to franchise arrangements and encompassing the environment within which this is located.

Within 24 hours, the lived experience of the first author had thus encountered major transport policy issues of (1) transport network resilience and disruption to human mobility/activities in the face of a major natural disaster (helped along by human activity with respect to climate change) and (2) public transport safety, both of which form part, but only a small part, of this volume. These are not the kinds of transport policy issues most of us would encounter very often. However, in Chapter 3, for example, Janet Stanley argues that we need to plan and shape our future transport policies taking greater account of more frequent and intense occurrences of transport network disruptions, the costs of which will be immense – perhaps easy to forget, unless you are close to the eye of the storm. Then in Chapter 16 Zhang and Yamamoto remind us of some of the safety challenges confronting Asian transport, Jackie Walters discusses safety in relation to informal transport in Africa in Chapter 17 and Brian Collins outlines how technology can help to ease safety concerns, in Chapter 20.

We note these two examples to illustrate the difficulty that we confronted in putting this book together. How do you prioritize such a vast agenda as transport

policy? Because the demand for transport is a derived demand, it forms part of most aspects of people's daily lives, as was experienced in Hong Kong. You can look at transport in a narrow sense, largely as just transport, or you can take a *derived demand* approach and seek to understand its importance in helping people, businesses and even our planet to flourish or flounder. We have taken the latter approach, since it is only at this high level, in our view, that you can confidently shape transport policy to make a positive societal difference.

Recognizing the diversity that this approach requires, the book includes chapters that approach research opportunities in transport policy in terms of

- the outcomes that society might want to support, encompassing economic, social and environmental goals and supportive processes. The societal goals perspectives form the focus of chapters 2, 3 and 4 and provide recurring lenses through which to consider transport policy throughout the book;
- governance arrangements, to increase the prospects of desired societal outcomes being achieved (Chapter 5 but also a matter raised by several other chapters, indicating its importance as a research area);
- how desired policy directions might be funded, with a particular focus on roads (Chapter 6);
- the roles that various modes of transport play or might play, encompassing both person and goods movement (chapters 7 to 12);
- challenges and opportunities across different continents (chapters 13 to 18); and
- new delivery models, technologies and data availabilities, and how these might disrupt current paradigms (chapters 19 to 22, but with some other chapters also venturing into these areas).

Each chapter seeks to both frame the current and emerging state of play in its field and then suggest research topics that will help further the development of more effective transport policies.

By seeking a broad approach and examining research opportunities through various lenses, length constraints inevitably mean that chapters must be rather selective in terms of what they cover in depth. Do not be surprised, then, if occasionally something you expected to see covered in some detail falls short of your expectations.

*(Storm update: A hotel room 44 floors up is not much fun in a typhoon. The noise outside is pretty intense. Hope the windows are secure. Several trees have been uprooted and the odd metal sign is flying past. It is time to go downstairs to the bar!)*

The land passenger transport sector lies on the cusp of a major transformation, guided by collaborative consumption, next generation vehicles, demographic change and digital technologies. Whilst there is widespread enthusiasm across the community for this nexus of disruptors, the implications on road capacity, traffic

congestion, land use and urban form remain unclear and, by extension, so too whether this emerging transport paradigm will bring a net benefit to the transport system, communities and the planet. Some important issues include the potential proliferation of point-to-point transportation, a continuation of universal vehicle ownership and the demise of fixed route public transport, all of which are matters raised by various industry leaders in technology and transportation.

Mobility as a Service (MaaS), based on shared mobility and modal integration, is promoted as a sustainable alternative, which accounts for the realities of spatial and temporal efficiency. Various models for implementing MaaS are being considered, including the distinction between commercially motivated models (presently well advanced in research and development) and systems which incorporate an institutional overlay. These futures have benefitted significantly by digital disruption. A number of chapters focus on this side of the transport policy research agenda, which will be a very significant factor influencing whether cities and regions are to become more productive, more socially inclusive and with a smaller environmental impact, or whether the changes in question will mainly benefit the few.

Disruptive change is one of the reasons why it is vital to take a broad integrated approach to transport policy, recognizing connections across the various realms of transport (e.g., public transport, roads, ports and air) and extending (for example) to land use policy and planning, housing futures and place making. Integrated governance models are central to progress in this regard and many chapters emphasize the importance of integrated governance, some approaching this from a modal perspective, others from an outcomes perspective and some from a regional setting.

Disruptive change and integrated policy/planning and governance illustrate the universality of the key issues that are covered in this book. They emerge from several different ways of looking at transport policy, emphasizing the importance of the *derived demand* approach. While cities are where these matters increasingly play out, as reflected in most chapters, regional perspectives also have much in common.

The fact that safety has not been a bigger focus of this report probably reflects the reality that the land transport systems in most of our authors' home settings are pretty good. For example, road accident fatality rates in developed countries are typically low and declining, relative to the transport task, with Scandinavian countries typically showing the way. For those interested in transport policy oriented research with a safety focus, however, you will still find plenty of opportunities to undertake useful work. For example, in developed countries, road accident injury rates are commonly on the rise, as are slips, trips and falls on buses (e.g., linked to an ageing user cohort and increasing traffic congestion), while in developing country settings, road accident fatality rates are commonly increasing, as motorization levels increase. Ways to tackle such challenges will include autonomous vehicles, as discussed in several chapters, but a wider range of tools will also be needed.

We thank all contributors for their work on this volume and their preparedness to suffer the demands that we have placed upon them, from word limits to deadlines. All are leaders in their fields and the time they have devoted to this task continues their contribution to improved transport policy outcomes.

To those who are contemplating research in transport policy, we trust that the book sparks your enthusiasm to go on the journey. We can assure you of considerable personal satisfaction and growth along the way and, most importantly, the opportunity to make a difference in enhancing desirable societal outcomes, through your evidence-based transport policy research. The time has never been better in this regard.

Royalties from the book are all being donated to the Institute of Transport Studies at University of Johannesburg, to acquire learning materials for their students. We thank those who have bought the book for their contribution to this purpose.