

Book review

Transportation Engineering

J. Wright. ICE Publishing, London, UK, 2015, ISBN 9780727759733, £30.00 (paperback), 168 pp.

Transportation Engineering is a book consisting of 168 pages and 11 chapters, which provides an overview of infrastructure provision in the UK context for all transport modes. The scope and size of the book endow it with an introductory nature, hence it would be a helpful first point of reference for students taking up the subject for the first time.

After the introductory chapter, the subsequent four chapters are based on the modes of rail, road, air and water. Following a brief diversion into modelling in Chapter 6, the mode theme is again picked up in Chapter 7, which deals with walking and cycling. The remaining Chapters 8–11 deal with policy, environmental impact, terminal design and location, and future developments.

Most of the chapters adopt a historical perspective as a way of introducing the specific modes, but this is noticeably absent in the chapters on roads and walking and cycling. The presentation of the background is engaging and informative, and is generally well supported by graphs and photographs. There are differences in emphasis between the chapters, with only the chapter on roads dealing with any level of technical detail; however, this remains at an introductory level and is in relation to geometric design (moreover, the orientation of the force vectors in Figure 3.6 would lead most engineers to wonder how quickly the vehicle would slip down the superelevation). The discussion on cycling has been expressed principally in terms of issues in relation to safety, rather than the more all-embracing transport planning context in which it is now more usually discussed and taught.

Chapter 6 on modelling covers a wide range of issues and ranges from a very brief introduction to demand modelling, through to issues concerning attempts to influence travel behaviour. The convention of measuring generalised cost in minutes has, for some reason, not been adopted in the equation presented, and this is likely to cause some readers confusion if they pursue their studies further.

The chapters on policy legislation and the environment cover the material well, except, perhaps, for the omission of discussion of the Transport and Works Act 1992 that enabled the construction of modern, light, rapid transit systems and rapid bus transit, which are modes also otherwise absent from the book. The chapter on termini does not treat buses, the needs and characteristics of which are also absent from the rest of the book.

Some could argue that the chapter on sustainability and environmental impact, which deals with land use planning, might lead better into the chapter on transport policy. It may also be argued that it might be better to place all the non-mode-specific chapters in the beginning of the book in order to set the planning and policy context before each mode is then discussed.

There is a general lack of evaluative comment, which is perhaps quite acceptable for an introductory book of this nature. However, it is a little surprising that no discussion is presented on, for example, the contentions over the High Speed 2 railway line. Another point of discussion could well have been around the issues of the value of time and the evaluation of externalities in cost–benefit appraisal. The book is not devoid of evaluative comment though. However, sometimes the reader may have to cross-refer between chapters to form a rounded view of the position the author is taking. A case in point here is the London Congestion Charge, which is discussed in pages 8, 65 and 93 and differently described as having an effect on congestion that is ‘open to debate’ and also as having been ‘judged a success’.

It is good to see a final chapter looking to the future, and there certainly remain challenges for transport provision in the future. The approach is based principally around modes and infrastructure technologies and provision, and as a consequence it does not reflect as fully as it might the implications for future changes in society and behaviour that may have an impact on transport demand. It is perhaps also disappointing that there is no recognition of the potential for present mode distinctions to partially disappear because of ‘merging’ of technologies in the future, for example, with the emergence of electric bicycles and small pod-style personal transport. There is also less emphasis than there might have been on changes that may come about as a consequence of the ever-greater size of the digital data transported around the UK.

Overall, the book provides a well-organised means for the reader to rapidly gain an insight into transport written from the point of view of a civil engineer. It can be read more or less in one sitting, and this has great advantages for someone who may need to obtain a quick overview of the subject area.

Transportation Engineering is one of six titles currently available in the ICE Textbook Series (see <http://www.icetextbooks.com>) aimed at undergraduate students.

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