

Review of *The Economics of Urban
Transportation* by Kenneth Small and Erik
Verhoef

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Review of *The Economics of Urban Transportation* by Kenneth Small and Erik Verhoef Routledge \$59.95 ISBN 978-0-415-28515-5

The Economics of Urban Transportation by Kenneth Small and Erik Verhoef is the latest book in the emerging area of transportation economics, and updates and extends Small's earlier *Urban Transportation Economics* published in 1992. The book comprises five chapters: Demand, Costs, Pricing, Investment, and Industrial Organization of Transportation Providers. These five chapters cover many of the important transportation economic issues that have emerged in the academic literature over the past three decades, including deregulation, privatization, and road pricing. The book provides the underlying theory that is leading economists, and increasingly policy-makers to examine alternative formulations of transportation systems. It is perhaps most pertinent in the area of road pricing, where a confluence of events, including the opportunities presented by electronic toll collection, continuing congestion, and the coming switch away from gasoline (and thus the gas tax) are making this an issue all transportation professionals will confront in one form or another over the coming decade.

The text provides a mainstream treatment of demand, including both aggregate and disaggregate (discrete choice) approaches in an intensively mathematical way (though not to the level of theoretical derivations). The econometrics is also covered in some detail. Helpfully, a list of variables used in the book is provided, though this is four full pages, and is only "selected" variables.

The discussion of costs includes accounting, engineering, and economic methods of cost estimating, and consideration of congestion and other externalities, which are important for understanding and developing welfare-maximizing prices. More

discussion could have been given to collection costs, the costs of collecting revenue, which are surprisingly large for many toll roads, and could help shape the design of alternative strategies. The chapter does include discussion of economies of scale, which are especially important in public transport economics. Significant attention is also paid to getting the correct technical (engineering) model for underlying economic congestion cost functions. Choosing unrealistic technological functions for use in models of road pricing has historically been a major weakness of transportation economics, and the attempts to rectify it are moving in the correct direction.

The chapter on pricing considers the idea of first-best and second-best (how to optimize when dealing with a suboptimal world), which is conceptually important for making economics relevant to policy.

There are several qualifications about the use of the book, that may suggest for which classes it is most appropriate, depending on the abilities of the students and the nature of the course. First, the book is math heavy: Chapter 2 numbers 61 equations and Chapter 3 has 44. Nevertheless, the equations are clearly supplemented with graphics that suggest the main idea. Second, the book only peripherally treats game theory, agent-based models, or network structure. It also glosses over the land use - transportation interaction (which of course could consume another book). Finally, for geographers, despite being about transportation economics, the book is not formulated with space and time comprising the structure over which economic transactions take place.

Transportation economists have had a major effect on policy, and the trend toward modal deregulation and privatization is due to lessons from transportation economics. Yet, given what is known about transportation economics, it may seem surprising that such basic issues like road pricing, which in congested circumstances if efficiently implemented can provide enormous gains, have barely emerged as a policy consideration outside a few central cities, while investment decisions are still so misguided. The problem of course is politics, on which this text says little, but whose absence suggests a fundamental topic: why are political systems at odds with economic efficiency and equity, and how can they be aligned?

This text should appear on the shelf of everyone practicing transportation economics, and is likely to become the standard in the field. I plan to use this for the transportation economics course I teach to civil engineering and planning students, and I think it provides a strong technical supplement for a more policy-oriented work like *Essays in Transport Economics and Policy* by Gomez-Ibanez, Tye, and Winston.

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