

Book Review

Button, K.J. and Hensher, D.A. (eds.)

Handbook of transport strategy, policy and institutions

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EJTIR, 6, no. 3 (2006), pp. 293-300

General impression

They've done it again! Elsevier recently published the 6th Handbook for Transport, edited by Ken Button and David Hensher, the Handbook of Transport Strategy, Policy and Institutions. The handbook contains 834 pages, pleasantly split into 46 chapters of some 15-20 pages each (the perfect size for a train commuter with one hour in-vehicle time per one-way trip), and is organized into sections covering:

- Institutional settings and markets
- Planning perspectives
- Asset management and funding
- Regulatory issues
- Evaluation frameworks
- National studies

Reviewing books is one of those jobs academics now and then do because it is more or less a moral task. It is very time consuming and does not result in any academic credits. The board of the *European Journal of Transport and Infrastructure Research* (EJTIR) was keen to publish a book review of this handbook. Unfortunately the first three persons we requested to do the job kindly suggested asking someone else, so I finally decided to do it myself, with, to be honest, a bit of hesitation. Though I like the series very much, I am one of those who have more affinity with the contents of the transport system than with the institutions, organization and policy itself. But after the first couple of chapters I started enjoying reading the book more and more. It is really very informative and provides the reader with a lot of insights into institutions, strategies and policy. And even those chapters that may be a little less useful for the reader still give a lot of insights. My general conclusion is: this book is a must for all academics and professionals who work in this area and do not yet have the basic knowledge on transport, strategy, policy, and institutions. In fact, I wish politicians who make decisions on transport markets, regulation and deregulation, financing infrastructure and public transport, liberalization and privatization would read the book. It would be helpful for them to

realize that the one-liners they use as a basis for their political standpoints (such as: ‘the market can do things more efficiently than the public sector’) are, in many cases, too simplistic .

So is this it? Before giving an overview of the contents in more detail I have to say there is (as usual) something left to be desired. First of all, several – if not most – of the chapters are written from an economist's point of view, ignoring other disciplines. Secondly and related to the previous remark, there is a problem with the knowledge one needs in order to be able to understand some chapters. The editors claim the book to be written for practitioners, researchers and students. However, in particular the first group, the practitioners, will often lack the knowledge of theories and concepts that are introduced either without or with very little explanation, making some chapters too advanced for them. Examples of theories include public choice theory, auction theory, and contestability theory. Examples of concepts include Ramsey pricing and Hicksian compensating surplus. It would be helpful for practitioners as well as for researchers and students with a background other than economics if the theories and concepts were briefly explained. Thirdly, some chapters elaborate on subjects without an explicit theoretical basis. For those who read most – if not all – the chapters cross-referencing to other chapters would do the job in several cases. I guess not all readers, especially practitioners, will think of this as a problem because they will read a selection of chapters. Fourth, though I am not a freak about being strictly systematic, a little more consistency between chapters would be helpful. An example includes the National studies in chapters 40-46: final sections cover quite different subjects, such as ‘conclusions’, ‘the way forward’ and ‘the future of transport policy’ making the reader curious as to how the other chapters’ authors think about the items they did not elaborate on. Fifth, the national studies would be better linked to the rest of the book if cross references were made and if the authors included the insights as provided in those other chapters. Sixth, the OECD perspective dominates in the book, with less (but still some) attention paid to the perspective of third world countries, China or the former Eastern European countries, with the exception of the chapter on policy in post-communist Europe. I probably would have done the same as editor, but one or a few chapters identifying the main differences would be nice.

An overview of chapters

Below I will shortly reflect on the chapters to give an impression of the contents of the book. For a complete list of chapters and authors see the next section.

In chapter 1, the introduction, Button and Hensher introduce the handbook, making clear that transport strategy and policy covers a wide range of disciplines, and that it is far from institutional-neutral. They also give an overview of themes in transport strategy, policy and institutions starting with the Roman Empire. Next they place the book in the series of Handbooks in Transport and make clear to the reader these handbooks are handbooks indeed and not textbooks nor are they research monographs.

Part 1: settings and markets

Chapter 2 is on market and government failure. Button elaborates on market failures in transport from an Anglo-Saxon perspective, focusing on those areas where there has been recent development in thinking about transport strategies, policies and institutions, and also

on several cases where this development has actually led to some reformations in policy. Subjects include market power, externalities, excessive competition, and government intervention failures.

Chapter 3, regulatory transitions, written by Tye, uses the US rail industry as the central case. It makes clear that deregulating all modes is not the way to go, due to political compromises, old contracts, sunk costs and bad experiences with unsuccessful transitions elsewhere. He also emphasizes the importance of transport carriers operating in networks.

Chapter 4, economic deregulation in the USA, written by Windle, gives an overview of experiences with deregulation over the past 25 years, showing that deregulation has generally had positive effects. Nevertheless it has not been a panacea for all problems in the transport industry. He also describes the rationale for economic regulations and the history of network deregulation. An important conclusion is that circumstances are constantly changing. My conclusion from this chapter is that it is risky to look at deregulation and regulation from a few generic principles only.

Preston focuses in chapter 5 on the tendering of services, describing several contract types, the theory of tendering, and empirical evidence on bus tendering showing that it reduced unit costs by, on average, some 10-20 percent. The chapter also covers studies on rail tendering/franchising, concluding that tendering in this sector is more problematic.

In chapter 6 Hensher discusses performance evaluation frameworks promoting a holistic framework called STO. He gives a useful checklist of broad principles for selecting performance measures, including both traditional dimensions as well as a broadening of these.

Nash covers the subject of privatisation in transport in chapter 7, thankfully using insights and experiences from one of the pioneer countries, the UK. He gives arguments for and against privatisation and describes several approaches to privatising, often in combination with other concepts such as regulation, deregulation and franchising.

In chapter 8 Van de Velde gives an overview of coordination, integration, and transport regulation, giving a theoretical perspective on coordination, a historical perspective on coordination policy and the coordination of public transport services. Thanks to little overlap with other chapters one can read this chapter independently.

Integrated transport systems, with the focus on public-private interfaces are dealt with by Viegas in chapter 9. Interoperability plays a key role within this subject. Integrations in public transport include physical, tariff and logical integration. Viegas shows it is not at all easy to bring integration principles into practice. Next he discusses the pros and cons of private party involvement. Finally, an overview of instruments for integration is given.

Part 2: planning perspectives

Lay gives an overview of the history of transport planning in chapter 10, starting in the 19th century, stressing the importance of increasing levels of car ownership in the 20th century for transport systems, planning, and policies. He elaborates on the models used, including the shortcomings of the traditional four step model. He finishes his chapter concluding: “In my personal view, the one historical lesson yet to be learnt by transport planners is that in the end market forces will exert more influence than government policy”.

Chapter 11, written by Levinson, describes the evolution of transport networks, both from a macroscopic as well as from a microscopic perspective.

Jensen-Butler and Madsen deal with transport and regional growth in chapter 12, emphasizing the two-way interaction between the both, and giving an overview of more traditional and relatively recent approaches. The chapter is more quantitative than most other chapters. Although of a high standard, I would have preferred more links with the rest of this book, or at least this part of the book.

Vickerman elaborates on infrastructure policy in chapter 13. He considers the basic economic characteristics of infrastructure, the possibility of a self-financing transport infrastructure system, the role of private finance in public infrastructure, and the problems associated with the maintenance and operation of infrastructure and how to set efficient regulatory incentives to infrastructure managers or private sector providers.

Chapter 14, written by May, Kelly and Shepherd, is on integrated transport strategies. They provide a set of definitions of integrated transport strategies, and consider in greater detail two possible approaches: the pursuit of synergy and the removal of barriers. Next they give some examples, including the London congestion charging study, the PROPOLIS study of Dortmund, and the Edinburgh integrated strategy study.

Weiner and Riklin discuss long-term planning. They provide an overview of the transportation planning process, highlighting the considerations inherent in effective long-term planning.

Part 3: asset management and funding

Firstly, in chapter 16 Stalebrink and Gifford give an overview of what transport asset management (TAM) is. TAM supports four key functional areas: (1) policy goals and objectives and performance measures, (2) planning and programming, (3) program delivery, and (4) systems monitoring and performance results. They describe the benefits of TAM and related tools, as well as TAM developments in the Commonwealth countries and in the USA. Maggi discusses the financing of transport infrastructure and the role of the state versus the private sector in chapter 17. The role of pricing and distributive implications are discussed as well as public-private partnership.

Chapter 18 by Hann and Mack gives a banking perspective on transport, showing that assets, profitability and cash flow are the key issues from a bank's perspective. It is very interesting to read this banking perspective and gives a lot of insights into how banks operate and especially why they operate as they do. Unfortunately one needs to have some basic knowledge that many readers will lack on these issues to fully understand the chapter.

Jones elaborates on financial analysis in chapter 19, using Australian toll road entities as the central case study. The case illustrates some basic analytical techniques used by financial analysts in assessing the performance of firms.

Abelson deals with public finance issues related to financing transport infrastructure in chapter 20. He shows that the optimal way to raise capital cannot be separated from the question of how capital is serviced and repaid. The optimal method of raising finance is the method that delivers overall the best value for money inclusive of the performance of the infrastructure. It is not necessarily the method that provides finance at least cost. He gives instruments for raising and servicing capital, links capital raising to user charges, risk and ownership and elaborates on raising capital for new transport infrastructure. This chapter is one of my favourites and I wish politicians active in the discussion on financing transport infrastructure would read it and bring the insights into practice.

In chapter 21 Gwilliam gives the World Bank's perspective on transport. The World Bank has made about 15% of its investments in the transport sector, believing it contributes significantly to growth and to poverty reduction. The World Bank has recognized that investments in constructing infrastructure are not enough, as failure to maintain that infrastructure and inefficiency in the organization of transport services may undermine the effectiveness of the investments made. Therefore, the World Bank has moved progressively to greater concern for the underlying sector institutions and policies.

Miller, Hough, and Hellegaard discuss the role of transport and non-profit institutions in asset management and funding in chapter 22. The USA perspective dominates. They present the characteristics of non-profit corporations as well as the advantages and disadvantages of private, non-profit organizations. They finally discuss some case studies. The chapter makes me curious to know what the authors think about the EU non-profit organizations and their role in transport.

Part 4: regulatory issues.

Morisson (chapter 23) gives an overview of the US air transportation deregulation. After 40 years of regulation US domestic passenger airlines were deregulated in 1978. The chapter gives an historical overview, the effects, and some troubles. They elaborate on the future. Next to the often reported advantages for the consumer (including lower fares, higher frequencies) he shows that deregulation is taking its toll on industry profits.

Tally deals with international maritime institutions. The maritime sector largely differs from overland sectors because laws to regulate international shipping are not enacted by an international legislative body, nor are they enforced by an international court.

Chapter 25, written by Polak, covers fostering inland waterways. The focus is on regulatory issues and on alternative regulatory regimes. The aim of the chapter is to survey what is known about the effects of these alternative regimes on economic efficiency. Though empirical evidence on the effectiveness of policies of regulations and deregulation on inland water transport is scarce, his careful conclusion is that there are certain advantages to a policy of deregulation. A disadvantage is that due to the sector structure of many small-scale firms, many people would lose their jobs due to the process of deregulation.

Jara-Diaz and Gschwender deal with pricing in public transport provision in chapter 26. The reader is guided towards optimal pricing in a mathematical way, including both the operations' and the users' costs.

In chapter 27 Tye and Horn discuss transport mergers using the US railroad industry as a case study. The overall impression is that the mergers were good for the sector; partly due to the mergers it is more healthy nowadays than it was in the 1970s.

The final chapter in this part is written by Vachal and Bitzan, who discuss protecting the captive railroad shipper in chapters 28.

Part 5: evaluation frameworks.

According to expectations the first chapter in this section (chapter 28 of the handbook), written by Willis, is on the most often used framework: the cost-benefit analysis (CBA). The chapter gives a nice overview of the current thinking on CBA, concluding CBA is both an art and a science. Unfortunately the link with the scope of the handbook, especially the role of institutions and strategies, is less than I would have liked.

Vreeker and Nijkamp give an overview of multicriteria analysis (MCA). It is a must for all those people who think CBA is the only way to go. As for the chapter on CBA, a stronger link with the scope of the handbook would give this chapter more added value compared to other overviews of MCA.

Houghton and Hensher discuss negotiated and competitively tendered performance-based contracts (PBCs) (chapter 31). They define PBCs and give examples and a case study.

Gritta (chapter 32) gives an overview of measures and models for measuring financial fitness and apply them to the US airline industry.

Stopher discusses the subject of voluntary travel behaviour change (VTBC) in chapter 33. He seems to be a little on the optimistic side of the spectrum which makes the chapter much more interesting than if it had been written by one of the sceptics. He concludes that VTBC probably is most effective when implemented as part of a package of transport initiatives.

Chapter 34, written by Page, is on transport policy for non-motorized modes. This chapter is one of my favorites. He discusses the policy reasons to promote walking and cycling, and safety and health implications. The perspectives on slow modes differ considerably between countries. Besides, he elaborates on the design aspects relevant for slow modes.

Gifford elaborates on flexible transport systems in chapter 35, showing that more flexibility is not unambiguously favourable. Controlling flexibility is an alternative to addressing uncertainty. He concludes that flexibility in the decision process seems easier to accomplish than flexibility in the design and operation. Next he mathematically describes flexibility in the theory of options.

Stimulating modal shift is dealt with in chapter 36 by Bonsall and is organized in three categories: those that discourage or restrict “undesirable” modes, those that improve the attractiveness of “desirable” modes, and those involving publicity or propaganda. The sticks seem to be more effective than the carrots. He also describes who can implement which policies.

Giuliano and Hayden discuss marketing public transport (chapter 37). They give an overview of marketing strategies aimed at increasing public transport use, using a broad definition of marketing and elaborating on market segmentation. Options are categorized into informing the public and pricing strategies.

Benson’s chapter 38 deals with implementing ITS, with a strong emphasis on long-term policy issues in the US national ITS program. The European reader might also consider reading the special issue on ADAS that was published in EJTIR in 2005 (Vol. 5, issue 4).

May, Shepherd and Emberger show how one can optimise transport strategies. Optimising implies identifying the best strategy to meet a given policy objective, and can be done in 9 stages that are systematically described.

Part 6 finally gives an overview of 7 national studies. In fact, most chapters deal with policies in clusters of countries: APEC (Asian Pacific Economic Cooperation), the EU, Post-communist Europe, ASEAN (the Association of Southeast Asian Nations) countries, the USA, Canada, and New Zealand and Australia. The advantage of this part is the wide geographical coverage, the disadvantage being that relatively little attention is paid to country specific policies within countries in a cluster.

Conclusion

With a price of 170 Euro this is not the book to ask for as a Christmas present, nor a book that many individuals will buy. Not that the price is unreasonable, the price per page is fair, but it simply is a lot of money. Most copies will be bought by libraries, sections of universities, and companies. This book is a must for at least universities, consultants and some other companies working in the area of policy making and strategies, including research and other activities. For students it is only worth the money if at least half of the chapters, preferable more, will be included in the courses.

List of subjects and authors

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4. Economic deregulation in the USA. Robert Windle
5. Tendering of services. John Preston
6. Performance evaluation frameworks. David Hensher
7. Privatisation in transport. Chris Nash
8. Coordination, integration and transport regulation. Didier van de Velde
9. Integrated transport systems: public-private interfaces. Jose Viegas
10. The history of transport planning. MX Lay
11. The evolution of transport networks. David Levinson
12. Transport and regional growth. Chris Jensen-Butler and Bjarne Madsen
13. Infrastructure policy. Roger Vickerman
14. Integrated transport strategies. Anthony May, Charlotte Kelly and Simson Shepherd.
15. Long-term planning. Edward Weiner and Elizabeth Riklin
16. Transportation asset management. Odd Stalebrink and Jonathan Gifford
17. Financing transport infrastructure. Rico Maggi
18. A banking perspective on transport. Nicolas Hann and Tim Mack
19. Financial analysis: application to Australian toll road entities. Stewart Jones
20. Financing transport infrastructure: public finance issues. Peter Abelson
21. The World Bank and transport. Ken Gwilliam
22. Asset management and funding: transport and non-profit institutions. James Miller, Jill Hough, Lyn Hellegaard
23. Deregulation of US air transportation. Steven Morrison
24. Regulatory issues: the role of international maritime institutions Wayne Taller
25. Fostering inland waterways. Jacob Polak
26. Making pricing work in public transport provision. Sergio Jara-Diaz and Antonio Gschwender.
27. Transport Mergers: the case of the US railroad. William Tye and John Horn

28. Protecting the captive railroad shipper. Kimberly Vachal and John Bitzan
29. Cost-Benefit Analysis. Kenneth Willis
30. Multicriteria evaluation of transport studies. Ron Vreeker and Peter Nijkamp
31. Negotiated and competitively tendered performance based contracts. Erne Houghton and David Hensher
32. Discriminant, logit, and neural network models for measuring financial fitness: application to the US airline industry Richard Gritta
33. Voluntary travel behavior change. Peter Stopher
34. Non-motorized transportation policy. Matthew Page
35. Flexible transport systems. Jonathan Gifford
36. Stimulating modal shift. Peter Bonsall
37. Marketing public transport. Genevieve Giuliano and Sara Hayden
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39. Optimization of transport strategies. Anthony May, Simon Shepherd and Guenter Emberger
40. Transport policy within APEC. Christopher Findlay and Christopher Kissling
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43. Transport policy in ASEAN countries. Anthony Chin
44. Transportation policy in the USA. Edward Weiner
45. Transport policy in Canada. Trevor Heaver and William Waters II
46. Transport policy in New Zealand and Australia. Derek Scrafton

Button, K. D. Hensher (2005), *Handbook of transport, strategy, policy and institutions*, *Handbook on Transport*, 6th edition. Amsterdam: Elsevier. ISBN 0-08-044115-7. Series ISSN: 1472-7889