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***ARVIO KIRJASTA "THE ECONOMICS OF REGULATING
ROAD TRANSPORT" (ERIK VERHOEF)***

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Muistion tausta

Oheinen muistio on Regional Science and Urban Economics -lehden (prof. Richard Arnott, Book Editor) Esko Niskaselta pyytämä arvio Erik Verhoefin kirjasta "The Economics of Regulating Road Transport." Arvio on hyväksytty julkaistavaksi mainitussa lehdessä.

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Title of the book: The Economics of Regulating Road Transport
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*1 General**

This book covers many important issues of road transport policy. It addresses the regulation of external effects in road transport, particularly environmental effects and congestion. The book discusses the efficiency, equity, and feasibility of road transport pricing. One central aim is to investigate reasons for the limited feasibility of road pricing, and ways for making pricing more attractive. A starting point is the contradiction between the obvious need for road pricing (as favored by most transport economists) and its limited feasibility in practice. Verhoef states at the beginning of his book: "The extensive research efforts have not yet been able to initiate the political response." Verhoef's first observation is that transport economists have too often focused on purely efficiency questions, paying too little attention to issues of equity. Since

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distributional impacts are important determinants of social and political feasibility of the suggested pricing measures, economists have not been able to convince citizens and politicians of the necessity of these measures.

The book consists of four parts. Part I contains introductory chapters 1 and 2. Part II, consisting of chapters 3-7, considers allocative efficiency. Part III, consisting of chapters 8-11, discusses the relations between equity and efficiency, and the feasibility of road pricing. Part IV contains the concluding chapter 12.

I find this book very interesting and useful. It lays out an impressive amount of recent work, undertaken by various authors in different research projects. Verhoef himself has been involved in many of these projects. Most of the work presented here is published elsewhere. The contribution of the book is to bring all this work together, to link it to other research, and present a coherent and personal view of the whole range of issues related to road transport policy. As such the book makes useful reading, not only to transport economists, but to all researchers in urban, regional or any other field with interest in these issues. Being nontechnical for the most part, the book should also interest practitioners of transport policy. In my view, libraries at universities and research institutions, as well as in administration, should buy this book.

Almost no book can be perfect. This book could have been made even better and more user friendly if the extensive material covered had been refined further. The definition of the central (cf. the book's title) term "regulation" is not given until chapter 8; a more appropriate place would be in the introductory chapter 2. Another observation of the same kind is that, while the so-called "unpaid bill" issue is brought up in the introductory part I of the book as an important issue from the point of view of equity, it is not mentioned in that part of the book which specifically analyzes equity issues. A different type of complaint, of a purely technical nature: the print is too small. Some figures (e.g. on pages 14-15) are tedious to read, and do not really invite closer investigation.

2 Road pricing -- regulation?

The title of the book promises that it will deal with "regulating road transport." But the book actually focuses on road pricing. Is "regulation" the right term to characterize the whole range of road pricing instruments and policies covered here? I think not. A closely related comment concerns the excessive use of the term "regulation" in this book. Verhoef, for example, consistently speaks of "regulatory parking fees." Why not simply say parking fees?

The definition of the central term regulation is given in chapter 8 (pp. 140-141). There Verhoef distinguishes between "internalization" and "regulation," and places road pricing into the latter category. I do not quite agree. Why should we view the various road pricing instruments considered here as regulatory? Supposedly, the government's act of building roads for driving purposes is not regarded, in the terminology of this book, as regulation. But governmental fees for their use are so regarded. Moreover, evidently, according to the definition above, charging for external costs is regulation, but charging for infrastructure costs is not. Verhoef's terminology becomes even more problematic when the viewpoint is extended -- and the importance of doing this is stressed in the book (see below) -- from the economist's partial approach to a more global approach. The same is also true when the viewpoint is extended to allow for different organizational forms. Then, when a road is administered by a private firm, its pricing of road usage, e.g. congestion pricing, is evidently not regulation. But pricing by government is.

This is not just a matter of academic hair-splitting. Regulation often has a negative connotation -- and especially so in the heated context of road transport policy. This may create unnecessary resistance to the whole idea of road pricing. For this reason, and for the conceptual and theoretical reasons referred to above, it is better to reserve the term regulation to those instances where the government intervenes with inter-firm relationships, or with relationships

between firms and consumers. But in those instances where the government charges for usage of something it itself provides, or charges for external effects that otherwise would be left unpriced, a better characterization is that government extends the scope of markets and of the market price system, rather than intervenes in it. This is the feature stressed in various documents by the European Commission, for example, in the Green Paper "Towards Fair and Efficient Pricing in Transport, Com(95)691.20.12.95."

3 Tradeoff between efficiency, equity and feasibility

Part II of the book deals with the efficiency aspects of road transport pricing. The efficiency of different second-best instruments as compared to the efficiency of first-best instruments is discussed in chapters 3 to 6. These chapters investigate second-best alternatives to the first-best policy of perfectly differentiated marginal cost pricing, second-best congestion pricing with an untolled alternative, efficiency of second-best pricing under different informational assumptions, and parking charges as a substitute for first-best road tolls. These chapters contain both theoretical analysis and simulation studies. Environmental externalities and congestion are covered. A static equilibrium approach, with elastic demand and a one-link or a two-link road network, is assumed. The discussion provides a useful summary of the state of the art, and also presents interesting new results.

Chapter 7 introduces a more global approach, which allows for interdependencies between "transport, spatial economy and the environment." Transport economists, in Verhoef's view, have too often restricted themselves to partial models and approaches (p. 113): "The last decades have witnessed a stream of economic studies in the field of transport and environment, which typically rely on the neoclassical concept of external costs, and are performed in static, partial equilibrium settings... However, many important issues are untouched... Therefore, 'optimal' levels of transport, and 'optimal' Pigouvian transport taxes, derived in this approach, may suffer from second-best biases." What, then, are the "important, untouched" issues? Verhoef is most concerned with (p. 113) "the difficulties in coming to a satisfactory mapping between external cost approaches and the paradigm of sustainability." He raises this issue but does not provide clear answers. True, this is not an easy task, either.

A central problem with policy discussions of road transport pricing thus far has been the mixing of efficiency and equity aspects. Verhoef (pp. 19-20) says that "These two elements are often confused in debates on the regulation of road transport externalities... Given such tension between efficiency and equity considerations, it is no surprise that the mixing up of equity and efficiency arguments may often lead to rather fuzzy discussions about the policy implications of research findings on external costs of road transport." Under these circumstances, the feasibility of road pricing is deemed to be limited.

Verhoef discusses, in chapters 8 to 11, the negative trade-off between efficiency and equity on the one hand, and between efficiency and feasibility on the other. In this sense, he considers all three – efficiency, equity and feasibility – as separate criteria.

4 Policy conclusions

The policy conclusions on road pricing can be divided into two parts: those regarding efficiency and equity of different instruments, and those regarding feasibility of different instruments. Verhoef summarizes his policy conclusions in chapter 12, with the title "Towards an Efficient and Socially Feasible Regulation of Road Transport Externalities." He states (p. 247): "Throughout the book, the complexity of regulating road transport externalities was stressed... This diversity renders a general conclusion impossible... A number of more or less general policy lessons can be drawn on the basis of the research discussed." Obviously the "less general policy lessons" here refer to the policy conclusions made in the earlier chapters 3-11 regarding the various instruments addressed there. But what would the kind of "general conclusions" referred to here look like, in principle? Such general conclusions, in my view, could be the following three: (1) road transport should not be treated in isolation, but in conjunction with other modes of transport; (2) road transport pricing must not be offered to road users and politicians as a separate instrument, but as a part of

a more general policy package; and (3) a common supranational approach and strategy is needed.

The last-mentioned conclusion applies, in particular, to Europe. Verhoef concentrates almost exclusively on the European situation and presents European applications. The issues are addressed, however, at the level of an individual country only. The book has only one, and very short, reference (p. 4) to the European Union, to the role of the European Commission, and to the ideas presented in various Commission documents. Certainly, more can be said about this. In my view, road pricing in Europe will be feasible only if it is approached at the European rather than national level. Individual countries may be unable to do it on their own. Related to this is the question of the role of the European Commission, and of national and local governments, which is not addressed in this book, either.

5 Further research

Reading this book makes one to think of several paths for future research. To conclude this review, I pick three of them. The first is the integration of dynamic and static analyses. This book employs static models; the use of dynamic models is brought up only in passing. An important application of dynamic models is the modeling of congestion. As Verhoef (p. 249) says, "Both

the economically oriented rising cost curves approach, followed in this book, and the more or less competing bottleneck approach have their own shortcomings... The integration of these two approaches would undoubtedly offer a fascinating challenge." It remains to see what this means in practice. Second, this book addresses the efficiency, equity and feasibility of road transport pricing only insofar as pricing of external costs is concerned. The book assumes the level of infrastructure as given. It is important to investigate the efficiency, equity and feasibility of road pricing in a wider context, including the interactions between pricing and infrastructure provision. Third, further research is needed on the factors that determine the political and social feasibility of road pricing. At least the following three general factors can be identified: (1) disagreements among different interest groups on the quantitative sizes of the external costs and benefits of road transport; (2) the economists' failure to address equity issues, and the concomitant mixing of efficiency and equity issues in policy debates; and (3) the role of institutions, at the local, national and supranational (EU etc.) level. This book has addressed only the second factor.

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