

## Book review:

### Harry Richardson and Chang-Hee Christine Bae (2008) Road Congestion Pricing in Europe: Implications for the United States

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Road pricing has a long and checkered history with many failed attempts interspersed by a small number of successes around the world. A question at the forefront of research and policy is whether the successes and failures hold useful lessons for designing and implementing road-pricing schemes in other countries and cities. Road Congestion Pricing in Europe (RCPE) provides a welcome and informative contribution to the debate.

As the title indicates, RCPE deals mainly with road pricing to alleviate congestion rather than to generate revenues or to tackle pollution and other road transportation externalities. The well-crafted introductory chapter by the editors is followed by 18 chapters organized into four parts. Part I deals with the UK and includes a historical review of UK road pricing policy, a model-based analysis of the practicality and fairness of national road charging (subject of a major study by the UK Department for Transport in 2004) and a congestion charging proposal for Cambridge. There are also two moderately technical but clearly written chapters on toll cordons and on second-best road congestion pricing when competing bus and rail services are privately operated.

Part II on the London congestion charge features a chapter on the scheme's success in alleviating congestion, two chapters on its environmental effects, and a chapter on how it might be transferred to US cities. Part III surveys road pricing and related policies outside the UK. The chapters cover heavy goods vehicle charges in continental Europe, experience in Asia, the Stockholm congestion charge and traffic restraint policies in Paris. Part IV concludes with a review of US road pricing policy, practice and experiments.

All chapters of RCPE are well-written and informative, and all draw clear and sometimes pointed conclusions. Several themes and questions recur. One theme is that various technological, practical, legal, institutional and acceptability barriers have to be overcome in order to introduce road pricing. Technological barriers include the cost of building and operating road pricing systems that are capable of varying tolls by time of day, location and vehicle type over wide geographical areas while protecting motorist privacy. Amongst the practical barriers are

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difficulties in computing second-best tolls, and gaps in knowledge such as how road charges outside city centres affect congestion and economic performance. Institutional barriers include multiple levels of government, both in Europe and the US, that would have to be involved in launching a road pricing scheme. Last, but not least in the list is public acceptability which is now widely regarded as the most difficult barrier to overcome.

A second and related theme in RCPE is that there is no silver bullet that can surmount all the barriers and still tackle congestion effectively. What is needed are carefully assembled policy packages encompassing pricing instruments (i.e., tolls and parking charges), revenue allocation rules (mainly to build new roads or improve public transit) and perhaps concessions (e.g. providing toll discounts and exemptions for residents or disadvantaged groups). A third theme is that the goals of a scheme should be clear and simple. If the mandate of a congestion pricing scheme is extended to include environmental goals and revenue generation, there is a danger that system costs and complexity will spiral out of control and public trust will be lost. As Martin Richards notes, the UK's Transport Innovation Fund was expected to focus on travel demand management. But it was expanded to support revenue generation and ways to boost national productivity and this has led to misunderstanding as to what local authorities are expected to accomplish.

A fourth and overriding question is how widely congestion pricing should be deployed and how rapidly it should be phased in. Most of the authors argue that an incremental path of small steps is preferable to "big-bang" implementation. This philosophy underlies both the UK Transport Innovation Fund goal of funding local schemes and the US federal Value Pricing Pilot Program to fund innovative road- and parking congestion pricing measures. The US Pilot Program has been quite successful since enabling legislation was passed in 1991, but the Transport Innovation Fund – established in 2004 – has dispensed only preliminary funding so far.

A final and central question of RCPE is: what can the US learn from road pricing experience in Europe? According to the authors, not a lot. Several point to differences between US cities and European cities where congestion pricing has been implemented. In Europe congestion tends to be concentrated in city centres whereas in the US it is dispersed on expressways and at local hot spots. This is reflected in the fact that most European schemes are cordons (in Stockholm and several Norwegian cities) or zonal schemes (in London) whereas all existing schemes in the US (as well as in Canada, Australia and various other countries) are facility-based. Except for New York City no US metropolitan area experiences congestion as severe as London's. And even in New York City nearly 40 percent of trips into the centre are made by automobile whereas only 10 percent are in London. Urban sprawl and the continuing trend towards suburb-to-suburb trips and trip chaining undermines public transit as a viable alternative to driving in the US.

Another difference is that the availability of toll-free routes is considered a right in the US, but not Europe, and this too militates in favour of tolling individual facilities rather than whole areas. Perhaps surprisingly, equity is also a greater concern in the US – possibly because a larger fraction of drivers come from low-income groups than in Europe.

A further reason why the US may have little to learn from Europe is simply that there are few successful schemes to emulate. London and Stockholm are often touted as successful models. However, both cities have features such as good public transit service and concentrated decision-making powers that are favorable for congestion pricing. Furthermore, the schemes in both cities are flawed. London's congestion charge has high operating costs and its effectiveness in reducing congestion delays has been eroded by extensive toll discounts and exemptions and by reallocation of road space away from cars. Stockholm's congestion charge, too, has lost much of its impact since it was made permanent in 2007. According to Hultkrantz and Liu (2009) this is due to a combination of rapid growth in the share of "green" cars that are exempt from the charge, a decision to make charges deductible from income tax, and reductions in the inflation-

adjusted real value of toll rates. These developments point to the need for continuing appraisal of scheme design, and periodic adjustments of toll rates as is done quarterly with Singapore's electronic road pricing system.

Overall, the near-term future of road pricing is unclear. On the one hand, traffic congestion is a severe problem, the principles of road pricing are now widely accepted and technology is no longer a major barrier. In their assessment of national road pricing in the UK Stephen Glaister and Daniel Graham remark "It is hard to imagine how the prospects for future national traffic growth can be managed without it". (p.58). And alternative congestion-relief policies do not seem to work. Rémy Prud'homme and Pierre Kopp conclude that traffic restraint policies in Paris since 2001 have increased the costs of congestion delay and pollutant emissions by nearly €800 million per annum. They consider the policies "worse than a congestion charge" despite having written critical assessments of both the London and Stockholm congestion charging schemes.

On the other hand, progress with road pricing seems to have stalled. Just over the last year it has suffered three major setbacks in the UK: rejection by referendum of a double cordon toll scheme for Manchester; a decision by the new mayor of London, Boris Johnson, to abolish the western extension of the charging zone; and an announcement by the Labour government that it will not proceed with national road user charging. In the US a step forward was made with the establishment in 2007 of the federal Urban Partnerships Program which funds pricing and complementary policies for congestion relief and revenue generation. Five cities have been awarded funds, but none of the schemes features area-based pricing along European lines. A hybrid scheme proposed for New York City was rejected by the state assembly in April, 2008. Plans for an area charge around downtown San Francisco also failed to advance, and the city is instead studying a demand-responsive parking pricing system.

To conclude it should be noted that RCPE has a few gaps. It does not cover road pricing attempts in the Netherlands or the ongoing Dutch Mobility Plan. And other than for a chapter on intercity truck tolling in Europe the focus is on passenger transport. (Freight transportation is covered in greater depth in Verhoef et al. (2008), another informative Edward Elgar volume that focuses on the prospects for transport infrastructure pricing in Europe rather than on transfer of European experience to the US.) These quibbles aside, RCPE does a fine job of addressing its subject. Few of the conclusions are very surprising, but the authors present and document their arguments well. RCPE should be of interest to a wide audience of transport researchers, planners, policy-makers and university students.

## References

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