

# **PRIVATISATION AND DEREGULATION OF PASSENGER TRANSPORT: A SUMMING UP**

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**February 6 1992**

## **INTRODUCTION**

Passenger transport in many countries is the subject of major review. The winds of change vary in strength; in some contexts there is thorough-going reform centred on the role of the market either as the ultimate arbiter of efficient service provision or in "joint venture" with public intervention, leading to competitive tendering. The introduction of actual or potential competition has sometimes been accompanied by actual or planned privatisation. Other reforms have adopted the words rather than the substance of more radical policies.

The Second international conference on privatisation and deregulation held in Tampere (Finland) in July 1991 continued the theme of the first conference in Australia (Hensher 1991), building on the recommendations to broaden out the debate on the role of surface public transport to incorporate rail transport and the automobile. Six workshops were assembled to capture the dimensions of the reform process:

1. experience with competitive tendering,
2. understanding competition and anti-trust behaviour,
3. externalities, public interest and private good,
4. management, institutional structures, the transportation planning process and the future of passenger transport,
5. road pricing and private financing, and
6. experience with corporatisation, deregulation and privatisation of public transport.

Some very strong messages evolved from discussions in the workshops and plenary sessions. Most notable is the important role that this conference series can

play in the evolution of constructive interchange between the theoretical cases for different types of change and the experiences with alternative interpretations of markets and intervention. In this, the conference was the richer for the participation of a significant number of experienced operators.

Seven broad themes emerged out of the four days of discussion. The emergent themes are:

1. The continuing debate on the role of the market and alternative forms of intervention
2. Progress in contracting and tendering, centred on a detailed diagnosis of a number of emerging models known by their original country of development (the UK, NZ, New South Wales and Swedish models).
3. The development of a framework for modal rivalry, with particular attention given to transport pricing, especially road congestion pricing and user-side subsidies for public transport and their alternatives.
4. Influencing the conduct of service supply by emphasis on ex ante or ex post strategies in competition policy. The problems identified include the power to dismantle entry barriers and building credible penalties for mis-behaviour.
5. New ways to encourage competitive efficiency. These include promoting rivalry by functional separation of common servicing (e.g. inter-modal ticketing); a focus on property development and value capture (notably for the railways); the allocation of land and the role of zoning constraints as part of a broader strategy on pricing and investment; and the privatisation of planning (e.g. the use of consultants and operator associations in the conduct of the tendering process or the development of social criteria for policy).
6. The political acceptability of reform agendas: the identification of strategies which give the emerging debate on reforms improved prospects of being translated into effective action is central for example to the future of road congestion pricing and user-side subsidies.
7. Management training for incumbents and potential entrants as an essential element of the information disclosure process: the case for including minimum requirements in the legislation for change.

## **COMPETITION POLICY**

As nations open up their transportation systems to competitive forces, be it by economic deregulation or competitive tendering, the effectiveness of competition as a weapon of productive and allocative efficiency comes under increasing scrutiny. Equally, the role and performance of competitive agencies in ensuring competition become critical. Most existing competition policies have both ex ante and ex post elements, on the one hand setting conditions which encourage competition (e.g. disallowing proposed mergers) and on the other mandating changes in revealed

conduct (e.g. requiring a particular practice to be dropped). The question is whether current policies are effective in either dimension. They may neither prevent objectionable behaviour nor provide sufficient disincentives to embark on it. The UK experience illuminates the problem. Competition policy there can do little to affect the entry conditions which determine the degree of competition, so it is not an effective ex ante instrument. On the other hand, its ability to punish objectionable behaviour lacks, for example, the US sanctions of severe financial penalties. So it is not an effective ex post instrument.

Reform can be directed at strengthening either aspect. The conference considered particularly ex ante instruments, especially the use of legislative reform designed to eliminate barriers to actual entry in the case of economic deregulation or to encourage potential competition in the case of competitive tendering. On the reasonable assumption that modes are unique ("buses are different") an ex ante strategy may involve the construction of rules for market conduct specific to a mode. Examples are an Office of Bus (OFBUS) or an Office of Rail (OFRAIL). This kind of ex ante strategy has however the potential to invite "capture". It requires specialists in the industry to be "independent" regulators. Such expertise has tended to be drawn from the industry. The self-regulation model currently implemented in some countries (e.g NSW, Australia) is one such example.

Thus, the relative emphasis on ex post and ex ante strategies will require assessment in the context of each nation's existing capability and the degree to which reform should involve specialisation in pro-competitive agencies.

## **PROGRESS IN CONTRACTING AND TENDERING**

As a conservative response to pressures to use the market as the final arbiter of optimal service supply, competitive tendering is being introduced systematically throughout a growing number of countries. The tendering philosophy is diversifying into many interpretations or "models" of the tendering process. The most widely implemented model is the UK model which, in London, emphasises cost-only contracts and, outside of London, bottom-line or minimum subsidy contracts. Outside London tendering is confined to situations where commercial provision of services has not followed economic deregulation.

Recent developments in Australia, New Zealand and Sweden offer alternative models. The Australian model introduced into NSW in the 1990 NSW Passenger Transport Act is a major variation. It emphasises the need to ensure that the incumbent operators in the private sector are given a 5-year period to satisfy the minimum levels of service. This is essentially a recognition of the historical contribution of the incumbents who have territorial monopolies. The NSW model is described fully in the paper by Graham.

The NSW model is characterised by a competitive franchising procedure which guarantees the supply of services by a single operator in a predefined spatial context. The spatial area is in the main the prior historical allocation. All incumbents are given the first opportunity to conform with the service requirements, leaving undefined the precise routings to be adopted. The service standards have to be

satisfied according to key influences on the role of bus transport such as population density and car ownership rates. The services provided of a commercial nature are supplied jointly with the provision of school services whose costs are reimbursed under a "school subsidy travel scheme" (SSTS). If an operator chooses not to provide the (minimum) level of service specified under the Act, then the services will be put out to competitive tender. An incumbent can opt immediately to withdraw or can use the 5-year period of grace to make all efforts to conform to the minimum levels of service. Holding the subsidy constant, the minimum service level initially suggests more value for money where services have to be upgraded.

The interpretation of "competition" by the private operators is interesting. It is argued that "actual" competition exists in two ways. First there is competition from other modes (which is a common source of competition in all models). Second, operators "compete" between themselves to establish superior performance in the supply of service. This is analogous to the Beesley- Hensher model of managerial competition in the provision of tolled private roads (Beesley and Hensher 1990). The claim that the operators compete for the same passengers is controversial. If it can be shown that one operator can compete away the customers of an operator on a different route because of superior service then this can be interpreted as spatial competition. It is clearly not the same as "head-on" competition.

One of the great challenges facing the NSW model is establishing the criteria for defining and updating standards over time as populations change. Linked in with this is monitoring which will provide the necessary data to enable determination of conformation with the Act. Over time this may provide an example of regulatory failure.

The New Zealand model, discussed in detail in papers by Wallis and Knight and briefly in Cox and Love, is modelled on the UK 1985 legislation as applied outside London. It is broader in that it embraces all passenger transport modes. Although promoted as "deregulation" the NZ approach evolved as part of the process leading up to the commencement of the Act on 1 July 1991. It is much more akin to competitive tendering with procedural variations. Commercial registration is permitted but unlike the UK model, there are a number of planning instruments which act as negative incentives to commercial registration. The consequence is a predominance of minimum-subsidy tenders. All contracts are for areas and not individual routes. Regional Councils can substantially influence the setting of service and fare levels, and are able to preclude commercial services to secure desired service and fare policies. The latter contrasts with the UK model in which the bottom-line tender is a "last resort" facility, adapted to what the commercial market reveals. Incumbents may receive a non-mandatory price preference up to 25% prior to July 1992 and then up to 12.5% up to June 1993. Any single application of this rule requires its application to be extended equitably to all existing operators in the area under the jurisdiction of a Regional Council.

In the transitional stage, The NZ model has been modified continually in order to minimise "disruption" to incumbent bus operators. A fixed infrastructure subsidy is paid to incumbent rail and ferry operators. The initial result of the procedures laid down is a 16% reduction in subsidy with very little change to the overall provision of

service.

There was broad agreement that a distinction must be made between the transitional and longer term impacts of competitively and non-competitively based reforms. Whether the appropriate incentives are in place to ensure real efficiency gains in the longer term application of competitive tendering/franchising remains to be proven. The priority on the development of comprehensive performance monitoring procedures is becoming clearer as more heterogeneity occurs in the reform procedures. The NZ model is the most "comprehensive" and also the most unwieldy. The NSW model is very conservative but identifiable. In both cases, the desire to protect the incumbent is paramount.

The conference recommended a continuing effort to separate responsibility for policy from the responsibility for providing services. One caveat is in order however; whether the market (by free entry) or planners (by controlled entry) should determine the nature of service is an issue of continuing debate. There is a growing view that the competitive tendering process should be broadened to encompass tendering for specification (the "architecture model") and tendering for planning provision.

## **ROAD PRICING AND USER-SIDE SUBSIDIES**

The recognition of the role of prices in delivering efficient signals has existed for many years. In two contexts, road congestion pricing and public transport (provider-side) subsidies, the political acceptability of efficient (social) user charges has been a barrier to their implementation. One non-political barrier has recently been essentially removed - the technological barrier of road pricing. Electronic road pricing as a feasible option is described in the paper by Hills and Blythe. It is up to the political process to introduce a regime of efficient economic charges across all surface modes. The literature on road pricing has become confused with the literature on road financing where the latter concentrates at present on the role of the private sector in building, owning, operating and transferring road infrastructure. Tolls on selective roads are not a systemwide pricing system but are simply a means of raising revenue to provide a return on the private sectors investment. Government has a perverse incentive in supporting road pricing as argued in the paper by Evans 1991 because as a monopolist it can raise a tax. The proper role of government as an agency is to aid the introduction of a tax and thus should be tax neutral.

However it is the crisis in road financing that has given road pricing its greatest chance of being implemented (with the proviso that the early introduction of urban tollways will provide beneficial examples of the success of a scheme of direct charges). By linking road pricing with the issues of financing, it is likely to assist in facilitating entry into the road business. The auction price associated with facilitating entry should reflect congestion pricing (i.e. tolls representing efficient economic charges). Aligned to the challenge of political acceptability is the demonstration that road pricing is compatible with the notion of sustainable development.

One of the most interesting issues is the impact that road pricing will have on modal shares. Lee suggests that in the USA context its major impact is on the occupancy of automobiles. This will affect the efficiency of the road system, but not via an increase in the demand for public transport. Road congestion pricing however should be evaluated in the broader context of pricing of all surface modes. Most notably we must recognise the under-pricing of urban public transport and the absence of efficiency and equity in a fare structure that is subsidised for the benefit of all users rather than users with genuine disadvantage.

The conference re-opened the 1970's debate on the role of user-side subsidies as an alternative to provider-side subsidies. One of the important tasks in achieving political acceptability is to identify the effects of user-side subsidies relative to the current system of provider-side subsidies. If all provider-side subsidies are shifted into user-side subsidies, what will be the predicted change in the patterns of service by mode. Three groups of travellers in particular have to be assessed - the elderly, the disabled and the children. The co-location issue will be important; user-side subsidies may well boost some routes but at the expense of other routes. It is predictable that this shift will have income effects and may increase car ownership. The prediction of effects is the first thing politically that has to be settled if a case for politically acceptable user -side subsidies is to be mounted.

Another competitive tendering strategy which emerged during the conference is bidding on the "lowest fare for a given minimum level of service". This model has positive incentives in respect of patronage although one has to recognise the possibility of overcrowding. To counter suggestions that differential fares for "equivalent" service between franchised areas has equity implications, it is argued that distributive justice in the provision of public transport can be achieved by other means. The critical issue is to ensure that services in one location are provided at the efficient cost given minimum levels of service. Any case for equity may be better accommodated by user-side subsidies. Thus this new tendering criterion reinforces the value of moving away from provider-side subsidies to user- side subsidies, which is fully compatible with incentive contracting associated with both productive and allocative efficiency and the separation of equity reconciliation. For example, in the context of any review of School Subsidy Travel Scheme in NSW this must be an attractive alternative, enabling both the operator to establish unambiguous financial obligations for the supply of services and the regulator to have a clear mandate to service the user.

## **INSTITUTIONAL REFORM**

Innovation in institutions to assist in establishing the political acceptability of major reform is essential. Many solidly based ideas have floundered in the past because of a poor specification of the scope and functions for the institutions to execute the ideas. Road pricing, for example, creates such a challenge, even when the questions of purpose, discussed earlier, have been resolved. Such a road price or tax will typically be collected over several urban jurisdictions and cut across established responsibilities for road quality. Yields will depend on collateral policies designed to keep roads clear. The money raised is the potential basis for cooperation, but keeping yields high involves different authorities spending varying

amounts of money. There are certain to be many claimants for exemption from paying; insofar as these are conceded, the revenues raised fall and the efficiency of the system declines. There will be competing claimants for shares of the proceeds. Each country will have to find its own particular solution to funding a viable institution. The conference felt that, after 30 years of economic analysis of road pricing, analytical skills should now be focused on these practical matters of organisational design.

The growth in contracting and tendering for transport services prompted the conference to consider how the principle involved could be extended to other areas of transport planning. The principle is to apply to a given function the test - must it be done in-house, or can it be put out to tender, and thus harness market forces to improve performance? A particular opportunity was seen for planning authorities to make use of the large pool of consultancy skills which has grown up in the area of transport planning. This was linked to two needs in particular - the development of practical criteria which could justify the allocation of subsidies to alternative modes and services in response to social needs, and devising and exercising the improved performance measures for transit authorities discussed earlier. Why not, the conference asked, employ consultants on incentive contracts to carry out these functions, as had already been done for many years in transit vehicle operations?

A certain amount of relevant experience was reported at the conference. It was recognised that extending the role of consultancy in this way represented a considerable challenge not only to the authorities concerned but also the consultants themselves. In particular, the transition from adviser to management responsibility, necessarily involving risks, was seen as extremely demanding in the functions now being considered, which involve close interaction with political agendas. Nevertheless, it was agreed that this was an area well worth exploring further.

## **PERFORMANCE MEASUREMENT**

Underlying the conference debate on improving the efficiency of transit firms was the recognition of the need for a practical but well founded set of measures of performance. Improving the productivity of a transit authority is central to the challenge to lower costs in a way that is consistent with improving efficiency, eliminating subsidy or limiting subsidy to services which are identified as genuine community service obligations (CSO's), and in ultimately providing profits (or "dividends") to the stakeholders.

Transit enterprises need a set of quantitative indicators to track performance in detail sufficient to identify the real sources of gain (or loss) in overall productivity. These measures should be more than ex post monitors, they should have the capability of providing ex ante guidance on what to do to improve productivity. In establishing a set of indicators, it is recognised that their usefulness will be gauged by whether they can show positive or negative differences between the transit operation and other enterprises. There is a growing recognition of the comparability of performance measures across all government trading enterprises (GTE's) and

where possible the inclusion of private enterprises as a useful benchmark.

Any measure of performance must be capable of measurement at many levels within an organisation, notably at the route level, such that it can be aggregated to any desired level for suitable comparisons (e.g. depot comparisons, division comparisons). Furthermore there must be a capability to map these indicators to operational measures to enable management to improve performance in line with pre-specified targets.

A focus of discussion was the development of an overall measure of productivity to provide a single index for comparisons between levels of activity within the transit firm and for contrasts with other GTE's. One particular measure having growing acceptance in the Treasuries of State and Federal governments, is total factor productivity (TFP). Partial measures of productivity (typically referred to as performance indicators) may seriously misstate productivity differences across time and between enterprises.

The essential elements of performance measurement identified were:

1. To rationalise clearly the need to adopt a particular approach to performance measurement as a suitable way of establishing a reference benchmark for comparisons within a transit firm and between it and other GTE's and private businesses.
2. To set out the data requirements necessary to obtain sound quantitative measures of performance at various desirable levels of disaggregation (for example, the route, route cluster, depot and division).
3. To quantify the performance measures for a transit firm.
4. To map the performance measures to a large number of contextual and operational factors (e.g. network configuration, on-road operating environment, composition of working time - normal and penalty) in order to establish suitable procedures to assist management in implementing change which is consistent with improving overall productivity.

## **TRANSPORTATION AND LAND USE CONTROLS FROM THE PERSPECTIVE OF PRIVATISATION**

Privatisation and deregulation of transport operations and facilities vis-a-vis land use and transport planning were not systematically explored in the conference. However, they came up repeatedly as important concerns which need to be addressed in future conferences. The key issues discussed are outlined below.

Despite the acknowledged primary relationship between transport and land use, its systematic observation and analysis have remained secondary. This has been due, in part, to the difficulties involved such as the variety of institutional settings and regulations in which land use planning and zoning is done, and their immense political sensitivity.



One way to pay for transport facilities is from the benefits accruing to land owners in the form of 'impact fees' assessed on developers at the time of issuing building permits. In return the city (or a government entity) obligates itself to building a particular facility within a specified time or to refund the money. They introduce a private instrument in planning for growth but are limited in scope and effect. In spite of the recognition of externalities, impact fees do not affect the planning of major transport arterials, which is a government function. Governments regard them as a tax to be raised to help finance roads which are already on the planning books.

The conference took the question: why has the planning process failed to deal effectively with both negative and positive externalities of transportation? This is despite the planners' rational approach: define, quantify and predict them, avoid or ameliorate them by means of planning and technology, gauge monetary values for them in order to compensate harm, internalise them in a benefit-cost calculus, and engage in participatory planning to gain agreement on a course of action to be implemented.

Since the freeway revolt in the early 70's, the planning process and procedures have been fragile and vulnerable to challenge. Using both the planning process and the court system the interests representing negative externalities have been successful in vetoing, delaying, shelving, but also improving the planned facilities.

The dilemmas effected by negative (and positive) externalities are exacerbated, and some would say caused, by the lack of markets for them. The central issues concern both equity and values: in what form (e.g. money; personal, local and global health effects; values such as aesthetics or historical preservation, etc.), when, and who suffer the consequences? An unintended by-product of the well-intended comprehensiveness of planning has been its bureaucratisation and inefficiency. In order to satisfy planning requirements a transport planner has to cover issues from design standards and travel demands to preservation of threatened species and historical landmarks.

How, then should planning be organised so as to be relevant to individuals' decisions and choices? In particular, could internalisation of the externalities and 'market place'-type decision making be accomplished by privatising planning? If privatisation of planning is desirable, in what kind of institutional framework should it operate? What issues, if any, should be left for the government?

Economic markets have proved remarkably effective in providing people with the goods and services they desire. Land use and transport planning have faltered in accounting for externalities; government policy instruments designed to correct for them are causing unaffordability of housing and transportation. An important question raised in the conference was: because public planning seems to fail, can internalisation of externalities and affordability of housing and transportation be accomplished by privatising planning ?

## **NEED FOR A THEORY OF IMPLEMENTATION**

In spite of knowledge and persuasive theoretical arguments, many attempts to introduce innovative transport strategies such as road pricing have met with major bureaucratic and political barriers. Road pricing for example illustrates the problem of translating concepts into actual policies. It produced one try in the 30 years after the principles were worked out around 1960.! A similar fate has met with many other innovative policies. During the same time period, and even longer, transport, housing, pollution, economic development, and other problems have been successfully tackled only in a few, if any, societies. World wide aid agencies dealing with these problems, the World Bank, United Nations, and others, as well as the regional planning agencies, all claiming to apply modern theories to help people and improve the environment, have developed into expansive bureaucracies. The efficacy of their policies and planning methods remains in serious doubt. Should the patient place his hopes for cure with the charisma of the doctor?

The state of the affairs calls for better theories of technique and better planning practice. Static theories can be made dynamic if they serve both as a method of application and as a method of investigation of the experiments conducted. Privatisation and deregulation, the theme of the conference, serve these purposes because they open up new perspectives and provide new data from previously untried policies. Current understanding of the market processes involved in privatisation and deregulation of passenger transport point to the need for fresh approaches and for questioning the present methods of planning transportation and land use.

## **REFERENCES**

Beesley, M.E. and Hensher, D.A. (1990) Private tollroads in urban areas: some thoughts on the economic and financial issues, **Transportation**, 16 (4), 329-342.

Hensher, D.A. (ed.) (1991) Competition and Ownership of bus and coach services, **Transportation Planning and Technology**, 15 (2/4), 83-414.

**APPENDIX: Complete List of Papers from the Conference, Tempere, Finland July 1991.**

**Keynote Paper: Reform in Passenger Transport: The Next Step**, Michael Beesley, London Business School, United Kingdom.

### **Plenary Session 1:**

**International Experience in Competitive Tendering**, Wendell Cox and Jean Love, Wendell Cox Consultancy, USA.

**Introductory Road Pricing: Possibilities and Difficulties**, Dan Nasman, The Swedish Road Administration, Sweden.

**The Regulation and Prospects for Privatization of Public Transport in the USSR under the New Economic Conditions**, Michail Ulitskyi, Automobile and Roads Construction Institute, USSR.

**Before and After Privatisation**, Takayuki Sasaki, West Japan Railway Company, Japan.

**Plenary Session 2:**

**Three Years' Experience of Bus Service Deregulation in Britain**, Peter White, Polytechnic of Central London, United Kingdom.

**Life Styles and Values. Non-Capital and Non-Transport Alternatives**, Peter Stopher, Louisiana Transportation Research Centre, USA.

**Privatization of Japanese Railroads**, Haruya Kirooka, Hosei University, Japan.

**Performance Evaluation in Passenger Transportation: What are Relevant Measures?** David Hensher, University of Sydney, Australia.

**Workshop 1: Experience with Competitive Tendering**

**Chair:** Wendell Cox, Wendell Cox Consultancy, USA.

**Competitive Tendering in the US: Overcoming Barriers**, Jim Seal, California Bus Association and Jean Love, Wendell Cox Consultancy, USA.

**Contracting Process in New Zealand**, Ian Wallis, Travers Morgan, New Zealand.

**Alternatives in Bidding for Service Contracts - the Scandinavian Experience**, Esa Mannisenmaki, Finnish Bus Association.

**Competition Policy and the British Bus Industry: The Case of Mergers**, Jonathan Preston, The University of Leeds.

**Privatisation and Deregulation in Passenger Transportation: The South African Experience with Special Reference to Competitive Tendering**, Leon Luyckx, Marthinus Verneulen, Scott & De Waal Inc., David Skinner, Scottrans Management Services, South Africa.

**Workshop 2: Understanding Competition and Anti-Trust Behaviour**

**Chair:** William B Tye, Putnam, Hayes & Bartlett Inc, USA

**Predatory Behaviour in the Passenger Transport Industry**, John Dodgson, The University of Leeds.

**Micro-Economic Model of a Public Transport System Under Competitive Conditions**, J Enrique Fernandez L, Pontificia Universidad Catolica de Chile.

**Barriers to Market Entry: Practical Experiences of UK Bus Market**, Harry Blundred, Transit Holdings, United Kingdom.

**Anti-Trust, Regulation and Identification of Predation in Transportation Services**, Yannis Katsoulacos, The University of Liverpool, United Kingdom.

**Airline Entry and Competition in New Zealand**, Gordon Mills, University of Sydney, Australia.

### **Workshop 3: Externalities; Public Interest and Private Good**

**Chair:** Chris Nash, The University of Leeds, UK

Peter Stopher, Louisiana Transportation Research Centre, USA.

**Property Rights Perspective to the Emergence of Publicly Owned Transit System in the US,** William F Shughart II, University of Mississippi, USA.

**Use and Non-Use Benefits of Public Transport Systems - Can They Be Valued, What is Their Relevance?** Chris Nash, The University of Leeds.

**An International Comparison of Economic Efficiency of the Passenger Railway Systems,** Tae H Oum, The University of British Columbia, Canada.

**Deregulation and Safety: The Airline Experience,** Wayne Talley, Old Dominion University, USA.

**Impact of Deregulation and Privatization of the UK Bus Industry on the Labour Force,** Philip Heseltine, University of Newcastle upon Tyne, United Kingdom.

### **Workshop 4: Management, Institutional Structures, the Transportation Planning Process and the Future of Passenger Transport.**

**Chair:** Mr Douglas Lee, UD Department of Transportation, USA

**Transit Deregulation and Market Structure,** Yossi Berechman, Tel Aviv University, Israel.

**An Integration of Ad-Hoc Transport Projects That Have Private Sector Support into Transportation Planning Process,** Paul Truelove, Aston University, United Kingdom.

**Transportation and Urban Growth Management - Possibilities for Real Balance,** Douglass Lee, US Department of Transportation, USA.

**Passenger Transport Futures - Quo Vadis?,** Peter Stopher, Louisiana Transportation Research Centre, Gary S Spivack, Southern California Rapid Transit District, USA.

**The Future of Railroads in Passenger Transport,** Peter Faller, Institut für Transportwirtschaft, Austria.

**Crossing Frontiers: The Liberalisation of Transport in Europe,** Russell Kilvington, Steer Davies Gleave, U.K.

### **Workshop 5: Road Pricing and Private Financing**

**Chair:** Esko Niskanen, University of Tampere, Finland.

**Congestion Charges,** Timothy Hau, World Bank, USA.

**Some Objections to Road Congestion Pricing,** Andrew Evans, University College London, United Kingdom.

**Technological Developments in Road Pricing,** Peter Hills, University of Newcastle upon Tyne, United Kingdom.

**Pricing, Financing and Ownership of Roads in a Free Society,** Gabriel Roth, Consultant,

USA.

**Road Investment with Road Pricing - Investment and Revenue/Cost Issues**, Odd Larsen, Institute of Transport Economics, Norway.

**Workshop 6: Public Transport, Experience with Corporatization, Deregulation and Privatization**

**Chair** Nigel Wilson, MIT, USA

**The Japanese Experience with Urban Private Rail Companies: Idiosyncratic or Exemplary**, Ken'ichi Shoji, Kobe University, Japan.

**The Economics of Private vs. Public Provision of Bus Transit Service** Kofi Obeng, North Carolina State University, USA.

**Structural Reform in New Zealand's Passenger Transport Industry**, Fiona Knight, Transit New Zealand, New Zealand.

**Commercially Viable Bus Services are Encouraged by Legislation in NSW Australia**, Roger Graham, Roger Graham & Associates, Australia.

**Deregulation of Public Transport in Sweden**, Kjell Jansson and Bosse Wallin, Stockholm Transport, Sweden.