



- MC ICAM Conference -

**ACCEPTABILITY OF
TRANSPORT PRICING STRATEGIES**

23-24 May, Dresden
Hotel Elbflorenz



A conference conducted by MC ICAM - A Fifth Framework Research Project for the
European Commission

<http://www.mcam.net/>

Introduction

Several studies and research projects all over the world have considered transport pricing strategies as promising attempts to solve the urgent traffic problems in urban areas. However, empirical findings have shown that public and political acceptability of such strategies is very low. This fact raises several questions:

1. How to explain the different levels of public acceptability of various travel demand management measures?
2. Which factors influence the degree of acceptability?
3. How should a phased approach look like from the point of view of acceptability of pricing strategies?

First aim of the conference is a contribution to an interdisciplinary exchange which covers all relevant aspects of acceptance, integrating economic, psychological, sociological and political points of views. One result should be a commonly agreed theoretical and methodological framework for acceptance studies in different transportation related fields.

Second aim is to deal with the lack of public and political acceptability, to bring together the most advanced state of the art and to propose forthcomings and possible solutions as basis for a phased approach towards transport pricing.

Target audience: Policy makers, transport experts, academics, politicians, consultants

For More Information

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Programme



Programme (draft)

Version 03 April 2002

Day One: Thursday 23 May 2002

Moderator: Prof. Dr. Bernhard Schlag, Dresden University of Technology

09:00	Registration Session One – The problem and some examples of possible solutions	
09:30	Introduction and welcome from MC ICAM	Dr. Niskanen (ITS, Leeds)
09:40	Conference Overview	Prof. Bernhard Schlag (TU Dresden)
09:50	Recent charging policy developments	Catharina Sikow (European Commission, DG TREN)
10:20	Key Note: Acceptability of transport pricing strategies: Meeting the challenge	Prof. Peter Jones (U Westminster)
11:00	<i>Coffee</i>	
11:30	Why are efficient transport policy instruments so seldom applied?	Prof. Bruno Frey (U Zurich)
12:00	Urban road pricing in Norway: Public acceptability and travel behaviour	Terje Tretvik (SINTEF Trondheim)
12:30	The efficiency costs of acceptability measures	Prof. Stef Proost (U Leuven)
13:00	<i>Lunch</i>	
	Session Two – State of the art: European research results	
14:15	European research results on acceptability of TDM and pricing measures	Jens Schade (TU Dresden)
14:35	Price acceptability in the transport sector: Lessons from the PATS project	Prof. José M Viegas & Rosário Macário (TIS, Lisbon)
14:55	An empirical comparison of public and political acceptability: what are the differences?	Dr. Heike Link (DIW Berlin)
15:15	Discussion	
15:45	<i>Coffee</i>	
16:15	The acceptability of pricing changes in road transport : how to reconcile efficiency and equity?	Charles Raux & Stéphanie Souche (LET, Lyon)
16:35	The “Pricing Measures Acceptance” (PRIMA) research project of DG TREN	Peter Güller (Synergo, CH)
16:55	Environmental awareness and acceptability of pricing policy in Germany	Prof. Udo Kuckartz, Heiko Grunenberg (U Marburg)
17:15	Discussion	
18:00	Close for the first day	
19:30	<i>Evening Dinner</i>	

Day Two: Friday 24 May 2002

Moderator: Dr. Esko Niskanen, University of Leeds, Coordinator of MC ICAM

Session Three – Factors influencing acceptability

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| 09:00 | Factors influencing the effectiveness and acceptability of pricing strategies | Dr. Linda Steg
(U Groningen) |
| 09:20 | Acceptability of road user charging influenced by system characteristics and individuals' perspectives | Sittha Jaensirisak, Prof.
Anthony D. May, & Dr. Mark
R. Wardman (ITS Leeds) |
| 09:40 | The influence of asking order. Empirical findings from Germany | Olaf Hölzer (U Heidelberg) |
| 10:00 | Transport infrastructure pricing in the past – lessons how to avoid user acceptance | Henning Tegner (TU Berlin) |
| 10:20 | Discussion | |
| 10:50 | <i>Coffee</i> | |
| 11:20 | What would you accept? Effectiveness, Equity and other factors explaining the acceptability of transport policies | Daniel Rölle/Christoph
Weber(U Stuttgart),
Sebastian Bamberg (TUD) |
| 11:40 | Public acceptability of traffic policy measures: The role of justice | Dr.Heidi Ittner, Dr. Ralf
Becker & Dr. Elisabeth Kals
(U Trier) |
| 12:00 | Road user charging: Option generation and public acceptability | Nazan Celikel,
(U Westminster) |
| 12:20 | Goal conflicts in political decision making: A survey of municipality politicians' views of road pricing | Prof. Tommy Gärling
(U Gothenburg) |
| 12:50 | Discussion | |
| 13:15 | <i>Lunch</i> | |

Session Four - How to enhance acceptability

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| 14:30 | Summary / 1st conclusions | Schlag/Schade |
| 14:45 | Round Table 5 min statements | Frey, Jones, Niskanen
Schlag, Viegas |
| 15:15 | Round Table Discussion | |
| 16:15 | Future European research directions | Niskanen/Verhoef |
| 16:30 | <i>Close / Coffee</i> | |

Abstracts

1. Peter Jones: “Acceptability of Transport Pricing Strategies: Meeting the Challenge”

University of Westminster, Transport Studies Group

KEYNOTE PAPER

We have now reached the situation where the major barriers to the successful implementation of transport pricing strategies relate largely to lack of stakeholder and political acceptability, rather than to technical or administrative problems. The challenge is to find meaningful ways of engaging various stakeholder groups in the policy process, and to design transport packages that provide perceived benefits to a wide range of interest groups while meeting key policy objectives.

The paper first discusses the nature of the problem. It reviews findings from a range of studies in different European countries that have measured acceptance levels in relation to road pricing schemes and other travel demand management proposals, and seeks to identify the kinds of factors that affect levels of acceptability. Next it explores various barriers to increased acceptability and the specific issues that need to be addressed if acceptance levels are to be maximised.

The emphasis then shifts to exploring solutions. First, in relation to devising ways in which the public and other stakeholder groups can be involved in the scheme design process, covering both pricing and complementary measures. On-going work in Edinburgh will be used as a case study example. Second, by broadening out the discussion of stakeholder involvement into an approach based on a complete, co-ordinated communications strategy, that includes aspects such as marketing and public relations. This will in part draw on findings from the EU TAPESTRY project.

Finally, the paper will draw out some key issues and propose a series of future research needs.

2. Bruno Frey: “Why are efficient transport policy instruments so seldom applied?”

University of Zurich, Institute for Empirical Economic Research

Economic theory convincingly shows that road pricing and, more generally, marginal cost pricing schemes, are efficient compared to doing nothing at all and are alternative policy instruments in the form of direct government interventions in the traffic flow. It is therefore surprising that such pricing instruments are applied so seldom because efficiency means that everyone is potentially better off and that the winners are able to compensate the losers. In order to understand the reasons behind it, it is useful to consider the relevant decisions makers:

A. The population

There are four major reasons for acceptance meeting with resistance:

1. Misunderstandings

A seemingly free good is being charged; pricing is perceived to be a charge rather than an incentive instrument affecting behaviour.

2. Price Aversion

People find pricing unfair compared to e.g. administrative intervention; people are aware that the controlling effect of introducing pricing tends to crowd out intrinsic motivation, thereby potentially producing a bad overall effect.

3. Aversion to Government Intervention

The public sector is already considered to be too dominant; people are opposed to an additional “tax”.

4. Distributional Concerns

The losers are more clearly identified than the winners; losses loom larger than gains.

B. Politicians

In addition to some of the reasons already mentioned, there are two other major reasons that are important:

5. Voters do not sufficiently attribute the positive effects of a well-functioning transport pricing policy to the politicians’ actions. The policy therefore has low reelection benefits.

6. More power can be exerted by direct administrative interventions.

C. Public Officials

The following reasons also apply:

7. Pricing policies are not in the legalistic tradition.

8. Public officials nurture the illusion that only direct intervention is really effective.

D. Interest Groups

9. Pricing instruments offer less scope for influencing public decisions.
10. The efficiency gains produced by pricing instruments are a public good insufficiently provided in the political process.

What can be done?

- (a) The provision of information to the actors is a necessary, but certainly not adequate, means and has limited effect.
- (b) There are few possibilities in the current political process, because the limited acceptance is the result of a politico-economic equilibrium.

Constitutional changes – in particular decentralization of political decision-making - are the most effective way to change the politico-economic equilibrium of little acceptance.

3. Terje Tretvik: “Urban road pricing in Norway: Public acceptability and travel behaviour”

SINTEF Civil and Environmental Engineering, Trondheim

In Norway, there is a long tradition of financing sections of road infrastructure, especially bridges and tunnels, by combining road user tolls and public funds. These toll projects are usually located outside built-up areas, typically replacing existing ferry crossings along the coast, or establishing new links in the road network.

More recently urban toll rings were introduced in the three largest Norwegian cities. Bergen was first (January 1986), followed by Oslo (February 1990) and Trondheim (October 1991). The focus of the argument for the Bergen toll ring was on raising extra private sector money, to be matched by extra government money, for road building purposes. The emphasis for the other two toll rings widened in line with increasing environmental awareness and developments in technology. Percentages of the revenue were earmarked for public transport, safety and environmental measures. The Trondheim scheme introduced time-differentiated charges, as a secondary demand management objective to the main objective of revenue raising.

This paper will examine the available evidence on acceptability of urban road user charging in Norway. Developments in attitudes and travel behaviour from after the introduction of the schemes will be compared with acceptability and mobility measures from the before situation. The general trend has been one of decreased public opposition over time, especially when the after situation is compared with the before situation.

4. Stef Proost: “The efficiency costs of acceptability measures”

Katholieke Universiteit Leuven, Centrum voor Economische Studiën

One of the central measures in acceptability policy packages are cheap Public Transport alternatives and an important tax refund to the car using population. We test the economic efficiency and distributional effect of these measures using a model for the economy.

5. Jens Schade: “European research results on acceptability of pricing and other travel demand management measures”

Dresden University of Technology, Traffic and Transportation Psychology

The present paper recaptures and summarizes the main findings of recent EU studies on acceptability of pricing schemes and other travel demand management strategies. Among others, results of the projects TransPrice, AFFORD, CUPID and MC ICAM are outlined .

Research questions :

- How high is current public acceptability of pricing schemes in Europe?
- Which factors have been shown to influence acceptability?

At least since the commissioned White paper on “ Fair Payment for Infrastructure Use: A phased approach to a common transport infrastructure charging framework in the EU” (1998) questions related to the actual implementation of the pricing principle have been gaining in significance. In addition, the present paper also discusses the necessary and second-best optimal implementation steps for urban transport and interurban road transport (as studied by, for example MC ICAM) from the perspective of acceptability constraints and issues.

TransPrice (1996-1999) “Trans Modal Integrated Urban Transport Pricing for Optimum Modal Split” <http://gridlock.york.ac.uk/transprice/>

AFFORD (1998-2000) “Acceptability of Fiscal and Financial Measures and Organisational Requirements for Demand Management“ <http://data.vatt.fi/afford/>

CUPID (2000-2004) "Co-ordinating Urban Pricing Integrated Demonstrations" <http://transport-pricing.net/cupid.html>

MC ICAM (2001-2003) "Implementation of Marginal Cost Pricing in Transport - Integrated Conceptual and Applied Model Analysis " <http://www.mcicam.net/>

6. José M Viegas and Rosário Macário: “Price acceptability in the transport sector: Lessons from the PATS project

TIS.pt, consultores em Transportes, Inovação e Sistemas, s.a., Lisboa – Portugal

Based on the recognition that the price element is systematically underused in transport systems, and on some of the consequences of that deficit, the EC has been stressing the need to include prices in the toolbox that has to be called into action for increasing efficiency of those transport systems. However, those appeals have not been followed by real action, as politicians most fear the consequences of those decisions for their own careers, following popular rejection of such pricing measures.

The PATS¹ research project was aimed at a deeper knowledge of the conditions needed for improved acceptability of adoption of prices leading to more efficient transport systems, through integration of those conditions in their structural context. This was to cover all transport modes and pricing instruments. This paper presents the main findings of the project, including the four empirical studies that have been conducted.

We start by noting the main issues that have an influence on acceptability of pricing changes, which go beyond the economic rationale and include items like functional convenience, perceptions and beliefs, forceful adaptation of behaviour, magnitude of price hikes, legitimacy of the authorities driving the change, etc., thus making it a very complex process. This is why it was decided to develop a formal framework for the analysis of acceptability, addressing the dimensions of effectiveness, equity and justice, as well as implementation feasibility.

On the empirical work, three different qualitative and one quantitative methods of research were used, out of which a set of clear indications, in the style of “do’s and don’ts” has been derived.

But the main result of the project is that acceptability is strongly enhanced if this issue is integrated in the decision process, which must adopt a discursive format, instead of the traditional purely analytical process. This means that decisions are considered as the result of a discussion process that involves a number of actors and their interactions, and the paper presents the main ideas about how to develop this type of process.

The paper concludes by recapping the main points that have to be observed for a more acceptable evolution of transport prices, the desirable allocation of roles in this respect among the various political levels, and some critical questions that come up in most concrete examples that have been studied in the project.

¹ PATS was a research project in the 4th Framework Program of the EC – Transport program

7. Heike Link: “An empirical comparison of public and political acceptability: what are the differences?”

German Institute for Economic Research, Berlin

The theoretical aspects of different pricing principles and the economic effects of specific pricing measures have been examined extensively in the scientific literature. However, most debate revolves around the issue of the public and (linked to this) political acceptability of pricing measures. Indeed concerns regarding acceptability now constitute the most significant single barrier to implementation, especially in the road transport sector where recent studies suggest that pricing measures are rejected by a majority of car drivers (e.g., Bartley 1995, Jones 1998).

This paper explicitly examines the acceptability of different transport pricing measures and the factors influencing acceptability. It summarises the results of empirical studies carried out in the PATS-project, a project funded by the European Commission under the 4th framework programme. This project dealt with user charging and taxation measures in the transport sector, covered all modes of transport. The research used both qualitative and quantitative survey techniques. The qualitative surveys took the form of (i) structured interviews with key transport operators and decision makers (key informants) in 9 European countries, (ii) focus groups with the general public, in 3 European countries and (iii) a Delphi survey with key informants, in 5 European countries. These qualitative methods were complemented by an extensive quantitative survey of public attitudes, undertaken in 6 European countries. The qualitative surveys considered both established pricing instruments such as fuel and vehicle taxation, parking charges, motorway tolling and urban road pricing and more novel instruments such as environmental charges, ecological tax reform and a more differentiated public transport pricing. The results from the initial set of quantitative surveys were used to inform the design of the subsequent public quantitative attitude surveys.

This paper will particularly attempt to compare the findings on political acceptability and public acceptability although the survey techniques used and the range of pricing measures explored differed. The main instrument to analyse political acceptability was the key informant survey mentioned above. This survey consisted of structured face-to-face interviews carried out with 104 key informants, in 9 European countries. These key informants comprised representatives from political parties, ministries (transport, economic affairs, finance), land-use planning and environmental authorities and municipalities, infrastructure providers and transport operators (from all transport modes), interest associations (touring clubs, associations of road hauliers, consumer associations, organisations of opponents to transport pricing and of supporters such as environmentalists). The main issues addressed within this survey were the factors which matter for acceptability, their importance and the relationship between them as well as identifying the supporters and opponents of pricing measures and their main arguments. Furthermore, acceptable elements of pricing and taxation measures were explored. Focus was placed on the fact that the views expressed at that stage were the official standpoint of the organisations represented by the interviewees. The key informants were asked what – from the point of view of their organisation – would be acceptable for transport providers and transport users.

Citizen surveys in six European countries were the main instrument used to explore individual's acceptability of pricing and taxation. A variety of pricing measures was analysed

with respect to the degree of acceptability from citizens, with the emphasis on understanding how the acceptability of a pricing policy measure is influenced by the variation in pricing levels, the use of revenues generated, the design and combination of compensatory measures and how these relationships vary across different countries. The survey design adopted for the citizen surveys was that of a tiered approach, with a common core of questions to allow comparability across the countries, but with different question sets for different institutional contexts and survey techniques. Questions on attitudes of citizens raised to all respondents in all countries surveyed were complemented by stated preference exercises performed in two countries. A total of just over 1300 individuals were interviewed in the six countries, with no country contributing less than 100 persons. The survey was designed as face-to-face interviews with respondents on-street, at home or in an interviewing suite.

8. Charles Raux & Stéphanie Souche: The acceptability of pricing changes in road transport : how to reconcile efficiency and equity?

Laboratoire d'Economie des Transports, Lyon

One works out an analytical framework of the acceptability of pricing changes in the transport sector. The analytical framework is built upon the confrontation of economic efficiency (efficient demand management), territorial equity (guarantee of accessibility), horizontal equity (user-pays principle), and vertical equity (welfare of those less favoured). This framework is then applied to a tolled Northern ring road scheme in the Lyons urban area: this road opened in 1997, in addition with free-flow capacity restrictions on parallel roads. It followed from this scheme an important protest and cancellation by several courts, which lead the authorities to partly suppress and decrease the toll on this road. The dimensions of efficiency and equity at stake in this scheme are analysed and illustrated with quantitative results.

A comparison is also made with some ongoing urban and suburban road toll schemes in France and various countries. The analysis shows that these efficiency and equity dimensions combine themselves, by most often reinforcing the ones the others in their negative or positive aspects. This analysis also shows that these various dimensions of equity cannot be ignored on pain of failure. Moreover, it enables us to identify the ways according to which the acceptability of urban road pricing could be improved, if not guaranteed.

9. Peter Gueller: „The Pricing Measures Acceptance (PRIMA) research project of DG TREN”

Synergo, Zurich

1. Acceptance relates to perceived benefits by users, non-users and potential investors and toll operators. The traffic problems of the city must be evident and it must be demonstrated that road pricing is the best way to complement other measures and thus to handle the problems for users as well as non-users. Road pricing should rather be perceived as a "facilitating" instrument and not as a kind of punishment. Furthermore potential concessionaires should feel convinced that it might be a good business.
2. Acceptance relates to availability of alternative modes of transport. Surveys show that road pricing often works well as part of a comprehensive policy package of road and public transport investments. This can include compensation for groups whose welfare will decrease by the road-pricing scheme. However the package must be of manageable size and need not be implemented all at once. The larger the package of policy measures, the larger is the risk that the political strings are not long enough to keep it together.
3. Acceptance relates to the level of charges and to the use of toll revenues. Experiences from the PRIMA case cities indicate that fairly low starting levels are needed and that the charges can be increased successively to meet financial requirements.
4. Acceptance relates to equity effects. Notice should be taken of effects related to income as well as to the location of housing, workplaces and service centres. Compensating measures should be considered for groups whose welfare will decrease by the pricing scheme.
5. Acceptance relates to the design of the decision making process needed for the introduction, discussion and implementation of a road pricing scheme. According to the PRIMA interviews a stepwise procedure characterised by adaptive learning seems to be best from the acceptability point of view. A financing toll system is more easily accepted than an ambitious pricing scheme differentiated by time and area and thus allowing for influencing travel behaviour. Furthermore, a pure financing scheme can be developed successively as more experience and knowledge is gained about the resulting effects. The complexities involved call for a widening of the classical synoptic approach to an adaptive learning process.
6. Acceptance relates to the negotiating abilities among the politicians involved at different levels of government and among the experts and planners representing the various affected governmental bodies. A bottom-up strategy where the initiative to introduce road pricing comes from the urban area, is essential but not enough. A supplementing top-down strategy is needed as well. The national legislation must be changed in many countries and financial support from the national government will make it easier for the urban citizens, especially car users to accept increased personal expenses.
7. Acceptance relates to the communication efforts initiated in the very beginning of the decision making process. The starting point for introducing road pricing must be a political and public discussion on the traffic problems and the general objectives of the urban transport policy. Representatives from the public should also be invited to discussion and assessment meetings and be given rich opportunities to suggest modifying alternatives.

8. Acceptance of urban road pricing depends on earlier road pricing experiences. Hence, EU-support for activities aiming at dissemination of information experiences between cities is very important. In the long run it will also be important to continuously assess the coherence of urban development and urban road pricing with existing interurban road pricing systems since public acceptance can be negatively affected if there are inconsistencies in the interface where these systems meet.
9. Acceptance from a majority of the citizens can not be expected from the outset. It will increase by an open communication process. Experiences from several cities show that acceptance tend to increase after the implementation. However, building acceptance is a long process that must continue even after the scheme begins operation.

10. Udo Kuckartz/ Heiko Grunenberg: “Environmental Awareness and Acceptability of Pricing Policy in Germany”

Philipps-Universitaet Marburg, Institut fuer Erziehungswissenschaft

The citizen’s willingness to pay and the acceptance of the financial consequences of governmental ecopolitical steps are the fundamental determination factors for the success of environmental policy.

This paper focuses on general aspects of willingness to pay and acceptability of pricing strategies. The paper is mainly based on two surveys:

- the German national survey on environmental awareness and environmental attitudes and behaviour that was conducted in 2000 (a follow up will be done in spring 2002)
- an international study on Environment that was realized as part of the International Social Survey Program (ISSP) in 2000. This study took place in more than 20 countries (for instance US, Germany, Norway, Finland, France, Spain, Czech Republic, Bulgaria)

The German national survey on environmental awareness contains a couple of items concerning the willingness to pay: We ask in a more general way if people are willing to pay higher prices for ecological products, if they would accept higher prices for a better protection of the environment and if they would accept cuts in their standard of living in order to protect the environment. Further we questioned the willingness to pay for energy and for specific products as well as for the acceptance to pay for higher gas prices. Further we questioned their attitude towards the Ecological Tax Reform which was passed by the German government since their assumption of office in 1998. The paper presents the results and tested the determinants for the willingness to pay (income, education, way’s of life, age, children, environmental awareness and values).

The second part analyses the acceptance of the Ecological Tax Reform. It will be seen that especially the perception of justice plays an important role for the governmental steps. The willingness to pay higher gas prices is determined by the income.

The third part of the paper focuses on some comparative international aspects. Is there a difference in the willingness to pay in selected European countries (Germany, Spain, Finland, Norway) and is that comparative higher or lower than to the USA?

Finally the paper discusses the alternatives of voluntary versus obligation in the environmental policy. What are the people’s opinions in different European countries concerning these two poles of environmental policy? Should people decide for themselves how to protect the environment or should the government pass laws to protect the environment? Even if this interferes with people’s rights to make their own decisions?

11. Linda Steg: “ Factors influencing the effectiveness and acceptability of pricing strategies”

Department of Psychology, University of Groningen

Pricing strategies are very popular among policy makers for influencing transport behaviour. In this paper, I will discuss when, how and why pricing can be effective. The assumptions underlying pricing strategies is that people behave rationally and choose the options that provide the highest quality against the lowest costs. However, this is not always the case. Consequently, pricing strategies might be less effective than expected. Transport behaviour is to a large extent habitual and does often not result from weighting all the pros and cons of available behavioural options. People are often not fully aware of the costs of driving a car. Moreover, several studies in travel psychology reveal that travel costs do not always play a significant role when people make decisions on how, when and where to travel. Other factors, like comfort, flexibility and travel time are often much more important.

Next, I will discuss factors influencing the acceptability of pricing strategies. Effective pricing strategies are often not easily implemented, for such price changes evoke resistance among the public. Several social and psychological conditions should be fulfilled for various pricing strategies to be acceptable.

12. Sittha Jaensirisak, Anthony D. May, and Mark R. Wardman: “Acceptability of Road User Charging Influenced by System Characteristics and Individuals’ Perspectives”

University of Leeds, Institute for Transport Studies

The acceptability of road user charging has been seen as one of the main barriers to its implementation. In order to design acceptable schemes, we need to understand how the public values the benefits of schemes and how acceptability varies according to system features. These have not been well explained in previous studies, which have addressed attitudes to road user charging schemes.

Moreover, beyond the individual general attitudes to a public policy, people may be not only concerned solely about their own interest (selfish perspective), but also with the public interest (social perspective). Some people may not accept the policy because they lose benefits even though the public gains. On the other hand, some people may accept it because society as a whole is better off. In other words, people may still be willing to do something that does not directly benefit them, but benefits their community. These lead to a hypothesis that road user charging would not be acceptable to the public, especially to car users who face the charges, unless some benefits are perceived as either benefits to self or to community, or both. The individuals’ perspectives may help to explain why road user charging, perceived as an effective policy for reducing transport problems, is acceptable to some people and unacceptable to others.

This research aims to identify factors to improve acceptability. It investigates how the public perceive and evaluate road pricing benefits and features. It also examines how the acceptability is sensitive to system benefits (car and bus travel time reductions, environmental improvement and revenue use) and system features (charging levels, charging methods, charged times and charge areas). Moreover, it studies the effect of selfish and social perspectives, which are likely to influence individuals to accept the policy. Acceptability was measured by whether respondents would vote for hypothetical charging schemes in a stated preference (SP) experiment. Hence, we arrive at measures of different degrees of acceptability, rather than a single measure of acceptability or not.

In this paper, the results of voting behaviour based on the conventional logit model are shown. The model presented was estimated on the SP response of 830 respondents from Leeds and London. The effects of personal characteristics (mode used, income, gender, age and location) and perceptions (of the current travel situation, congestion and pollution problems, and the effectiveness of the schemes in reducing the problems) on voting are also investigated using segmentation analysis. This explores the extent to which results differ among groups of the public. Furthermore, the study examines taste variation among individuals, which is from unobserved sources and unable to be captured by the segmentation of respondents. This is achieved through the use of the random parameters logit model. Finally, the results of forecasts of acceptance levels for different groups of people and for various road user charging schemes are illustrated.

In conclusion, the study shows that the acceptability of road user charging can vary substantially across different charging system characteristics. A key benefit to improve

acceptability of the policy is that the environment is substantially improved. The study also demonstrates that acceptability depends highly on the individual's perceptions of benefits to themselves and to society as a whole.

13. Olaf Hölzer: The Influence of Asking Order. Empirical Findings from Germany

University of Heidelberg, Interdisciplinary Institute for Environmental Economics, Germany

In modern societies private cars play a very important role in satisfying existing mobility demands. But current car traffic also causes serious problems like congestion, pollution, noise and last not least accidents. Theory of transport economics detects the problem as one of negative externalities: since marginal social costs exceed the marginal private costs, demand is too high. The standard economic solution is to internalise these external costs by raising the price of the usage of the externality. Since raising any prices is generally disliked by the respective user group, the acceptance of pricing policies in the field of transport is low, as expected. But raising prices for externalities is not the end of the story. It generates revenues, which one can use for a lot of purposes.

Evaluating a pricing policy is therefore a two-dimensional question: By what to raise money and what to do with it?

An interesting question is what happens with the acceptability of a pricing policy when the order of asking is changed: What to spend money for and how to finance? Both with a set of possible transport policy measures. The cash flow of both ways of asking is the same, and therefore the efficiency. But one time there is a positive objective of “supporting anything” instead of “suppressing anything“. Are pricing policies, asked this way, more acceptable for people?

To answer this question, in a face-to face survey with about 1000 respondents throughout Germany, which was conducted in November 2001, were asked two versions of the same pairs of measures, each given to one half of the respondents. The first half was asked the following way:

Given the general strategy of making car driving more expensive is on the agenda, which measures from a list of four are acceptable, which ones are not? In this case, what is best done with the revenues?

The second half of the respondents got the following questions:

Given the government decided to spend money to improve the traffic situation, which concrete measures from a list of five are preferred? In this case, how should the measures be financed?

The first glance at the data indicates that the second way of asking generates better values, but the difference seems not to be very big. When the total analysis of the survey is finished in February 2002, it might very well be able to show ways how to overcome the current deficiencies in transport policy and give suggestions not only for the design of strategies and measures, but also for information and communication necessities.

14. Henning Tegner: Transport Infrastructure Pricing in the past – lessons how to avoid user acceptance

Technical University of Berlin

According to world wide experiences, the majority of transport infrastructure projects which were based on user charges failed in economic terms, of which the Channel Tunnel project may be one of the most popular examples

It is remarkable that pricing recommendations of economists were completely ignored by the makers of these projects. As a result, most projects were realized without any systematic market research, and pricing was based on average costs, not on two part-tariffs, and not on optional two part-tariffs as recommended by economists. Therefore losses in welfare to the economy and in revenues to the operators should have been expected but were not. As far as transport pricing projects are not initiated by private operators but by state authorities mistrust and heavy resistance of users is extremely rational: On the one hand, politicians usually have no discipline to spend revenues in the sense of the users (as recommended by the economic *principle of fiscal equivalence*), on the other hand, confronted with user resistance, they have to consider the next election. The situation is even worse, as – national or local – government's decisions towards infrastructure charging are made in a monopolistic, non-competitive environment. Privatisation and elements of competition contribute to overcome these barriers, as experienced in practise: Empirical results of the Tunnel Prado Carenage in Marseille (F) and of the Herrentunnel in Lübeck (D) show that user acceptance can be achieved by professional market research, good arguments and by the involvement of relevant user groups.

15. Daniel Rölle*, Christoph Weber* & Sebastian Bamberg: What would you accept? Effectiveness, Equity and other factors explaining the acceptability of transport policies**

* University of Stuttgart

** TU Dresden

Beside the effectiveness of various transport policies also their acceptance by the citizens is of primordial importance. For example the discussions about the gasoline price and road pricing have shown that policies considered as effective are sometimes not enforceable. At the end the policy must be accepted by the citizens whom it concerns.

There are several studies trying to differentiate between 'acceptance' and 'acceptability'. But still the quality of the results depends on the acceptance object. In our studies we tried to find an answer to the following questions:

- How can the concept of acceptability be measured?
- How do people accept different transport policies?
- Which are the explaining factors for the acceptance of these policies?

We performed a postal survey (N=1178) in three cities of Baden-Württemberg. These cities differ in size and public transport infrastructure. We proposed several policy scenarios to the respondents in order to analyse the explaining factors for acceptability. Among the multiple factors analysed, mostly the perceived equity and the perceived effectiveness were found to explain the acceptance of a policy. Furthermore we compared the perceived effectiveness to the impact the respondents expected on their own travel mode choice.

16. Heidi Ittner, Ralf Becker & Elisabeth Kals: „The role of justice: public acceptability of traffic policy measures”

University of Trier, Germany

There is no doubt about the urgency of traffic problems in urban areas. Therefore, attempts to solve these problems are necessary on two different levels: First, on the – classical – individual level that addresses the impact of the choice of transportation of the citizens. Second, on a less classical, but maybe more important political level that emphasises the importance of various structural measures to reduce traffic. But, in modern democracies their successful and sustainable realization is only possible if people do accept and support these measures.

Therefore, from a psychological perspective the first crucial question is: Which factors determine whether an individual accepts or rejects restrictive policy measures? In our own research with self-report questionnaires we found consistent lines of empirical findings. In accordance with the international work on "green justice", our findings show that it is especially the individual appraisal of the justice of various measures that plays a decisive role. For example, in a recent empirical study concerning the reduction of the traffic in the city of Trier, it was exactly this appraisal that was the most powerful predictor for explaining the willingness to actively support restrictive measures ($N_1 = 369$; $R^2 = .54$).

Consequently, the second question is: Which factors influence this individual appraisal of the justice of (restrictive) traffic policy measures? In line with other research findings ($N_2 = 313$; $N_3 = 81$) this study showed a very strong correlation between the appraisal of different measures as just and the perceived efficiency of these measures. In addition, there are two more points which are important to explain appraisals of justice: the possibility and probability to punish the ones who disregard the measures (like bans); and the fairness of the distribution of profits and costs owing to the measures ($N_2 = 313$; $R^2 = .53$).

All these findings underline the importance of the appraisal of justice in order to promote the public acceptability as well as the individual willingness to actively engage in proenvironmental, political commitments. Furthermore, they have crucial implications for the planning and successful communication of (restrictive) traffic policy measures.

17. Nazan Celekel: “Road user charging: Option generation and public acceptability”

University of Westminster, Transport Studies Group

In the development of Road User Charging (RUC) schemes to date, relatively little attention has been paid to exploring **how to maximise the acceptability of RUC** in urban areas, by designing local options that draw on the full range of potential design combinations and the wide range of supporting or complementary measures that could be funded from the net revenue. There are many design parameters, including: varying area of coverage, type, time and level of charge, discounts, exemptions and the technology which is used for operation and enforcement. Combinations of different levels of these parameters allow a very large number of possible options to be generated.

The paper describes a new methodology for generating options to assist in designing road user charging (RUC) schemes that best meet the objectives of local authorities and the concerns of various stakeholder groups. It is based on an ‘option generation’ framework that sets out the key parameters of an RUC scheme and the various options available in each case. The methodology incorporates a simple spreadsheet model that gives a broad indication of the amount of revenue raised and the level of traffic reduction likely to result from different configurations of scheme. However pricing is not the only means by which a reduction in car use can be achieved. The framework also includes an ‘objectives-measures’ matrix, based on a set of causal chains, that helps to identify measures that can substitute for RUC or complement its introduction.

In the framework, consultation/participation is used as a mechanism for addressing local needs and concerns and a means of devising solutions for addressing them in designing RUC options. The framework is being applied in two urban areas in the UK to demonstrate its applicability, through a series of meetings with local professionals, the public and other stakeholder groups.

18. Tommy Gärling: “Goal Conflicts in Political Decision Making: A Survey of Municipality Politicians’ Views of Road Pricing”

University of Gotheborg

An ongoing discussion concerns road-pricing schemes as measures to counter traffic congestion and air pollution in metropolitan areas. If such measures are to be effective, road-pricing fees must be set sufficiently high. However, municipalities are likely to have other goals besides reducing car use such as upholding fairness among citizens and financial goals such as creating revenues. If conflicts prove to exist between different goals, road-pricing schemes are not likely to fully attain the environmental goal. To investigate the degree to which these goal conflicts exist, members of the local governments in the three major cities of Sweden responded to a survey questionnaire. They rated a number of principles guiding the setting of road-pricing fees hypothesized to correspond to the three goals. The results showed that, for the political majority, the hypothesized goal conflicts existed in that no single goal was optimized. It is concluded that especially fairness may prevent that road pricing will achieve the environmental goal.

REGISTRATION FORM (Please type or use block letters)

Deadline: **May 10th, 2002**

Name: (family, first) Prof. Dr. Mr. Mrs. Ms.

Company / Institution

Department

Address

Street

Zip Code

City

Country

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Fax

e-mail

Registration Fee: **100 €**

(includes all conference material and lunch (twice) and coffee (four times))

Cancellation:

Must be made in writing. If the cancellation of your registration is received before May 10th 2002, 30 € of the total pre-paid amount will be refunded. No reimbursement can be made for cancellation after this date.

*E. Conference Dinner on May 23rd, 2002 at the "Kahnaletto" restaurant
(a buffet ; beverages are not included)*

Participation: yes no 30 € per Person 30 € x _____ = _____ €

Accommodation:

Deadline: April 30th, 2002

Please reserve the following accommodation at the indicated special rate per room and night, incl. breakfast, service and tax:

Arrival: _____ Departure: _____ Number of nights: _____

		single room	double room	
<input type="radio"/>	Elbflorenz (Conference venue) ****	<input type="radio"/> 88 €	<input type="radio"/> 103 €	number of rooms _____
<input type="radio"/>	Ibis-Hotel Bastei**	<input type="radio"/> 66 €	<input type="radio"/> 85 €	number of rooms _____
<input type="radio"/>	Hilton****	<input type="radio"/> 135 €	<input type="radio"/> 150 €	number of rooms _____

Form of Payment

The total amount due for registration must be paid **only in EUROS (€)**, free of all charges before May 10th to:

Bank transfer to: INTERCOM Konferenzservice TU Dresden, Stadtparkasse Dresden, sorting code: 850 551 42
account no.: 354 850 531

Credit card (pls. mark)

VISA Master Card American Express

_____ credit card number

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I authorise the charge of _____ € to the above card for registration and dinner. I agree that, in case of cancellation of the accommodation after April 30th, 2002, the amount for one night will be charged by the hotel.

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