



---

# The acceptability of road charging

---

Jens Schade

Dresden University of Technology

[schade@verkehrspsychologie-dresden.de](mailto:schade@verkehrspsychologie-dresden.de)

<http://www.tu-dresden.de/vpsy/>

# Outline

---

1. Importance of the theme
2. What is known?
3. Some Policy Implications
4. Research gaps and plans for future research

# 1. Why “Acceptability” Is Important?

---

- Democratic society (e.g. referendum)
  - User perspective
  - Strong public resistance may lead to fear of political parties about negative consequences for their next elections
  - Resistance might be exhibited in the form of demonstrations, boycotts or even sabotage.
- ➔ The more people accept road pricing the more effective the measure will be.

# CURACAO: User Needs Assessment

- Requirements and preferences of cities and regions concerning the implementation of urban road pricing schemes.

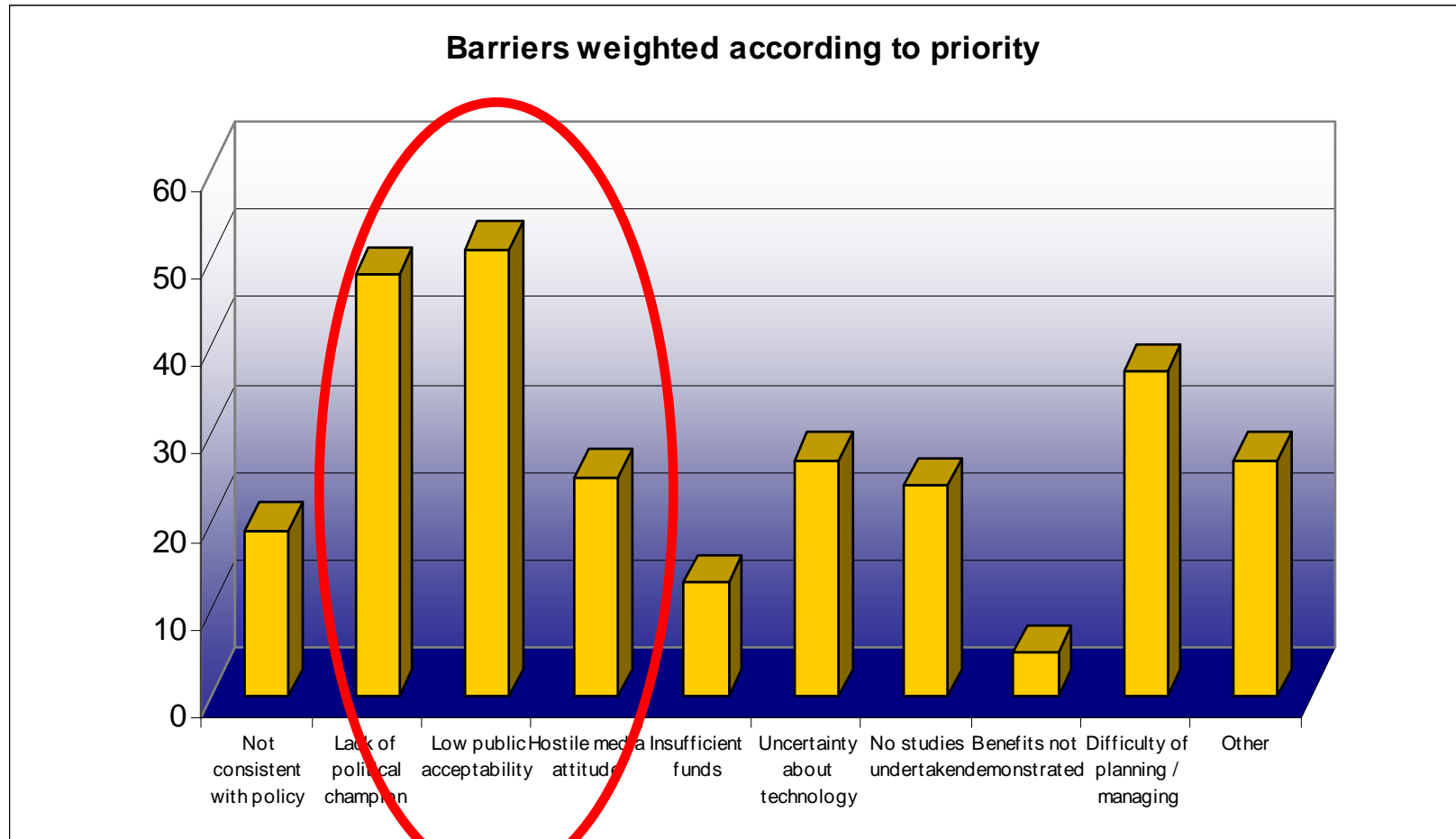


Amsterdam  
Belfast  
Berlin  
Bristol  
Cambridgeshire  
Cardiff  
Coventry  
Dublin  
Durham  
Bologna/Emilia Romagna  
Genova  
Manchester  
Helsinki  
Madrid  
Northyneside  
Nottingham  
Plymouth  
Shropshire  
London  
Utrecht  
Vilnius  
Warsaw

**Survey in 22  
European cities**

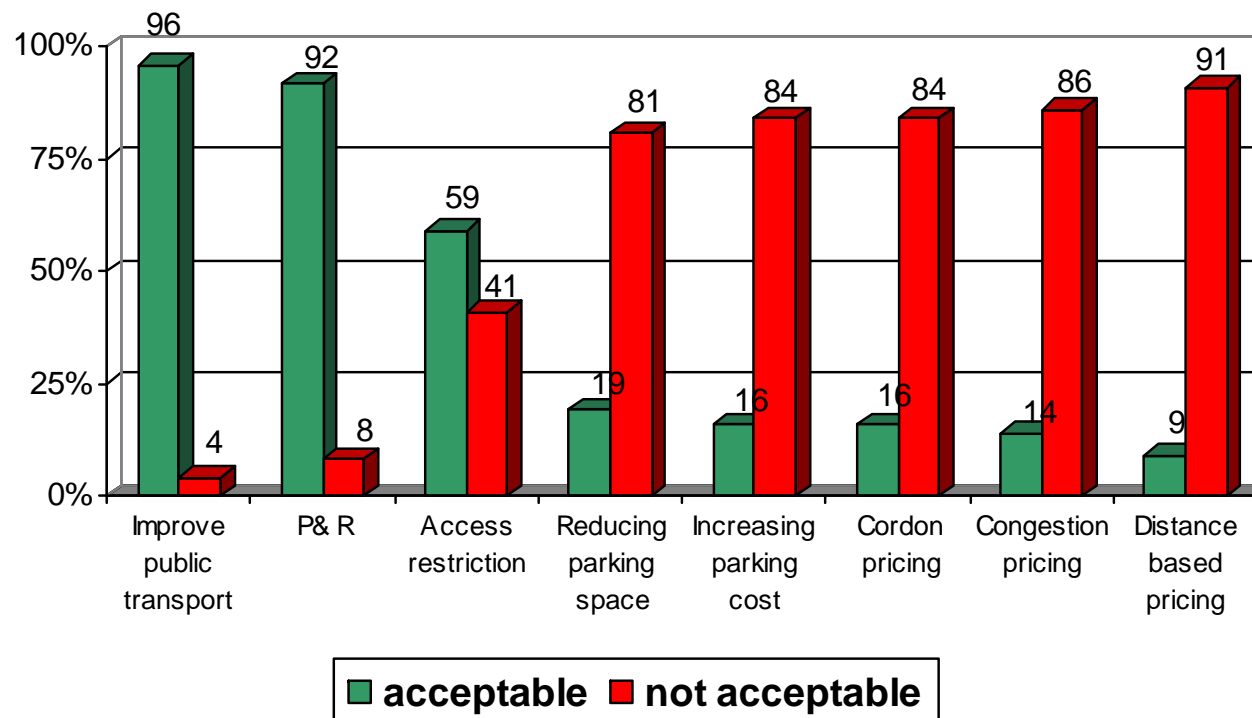
# Barriers to Road Pricing

## CURACAO Survey Results (UNAQ)



## 2. What is known?

- Generally, RUC is the ***least accepted*** TDM measure (with varying degrees)



# Important determinants of acceptability

---

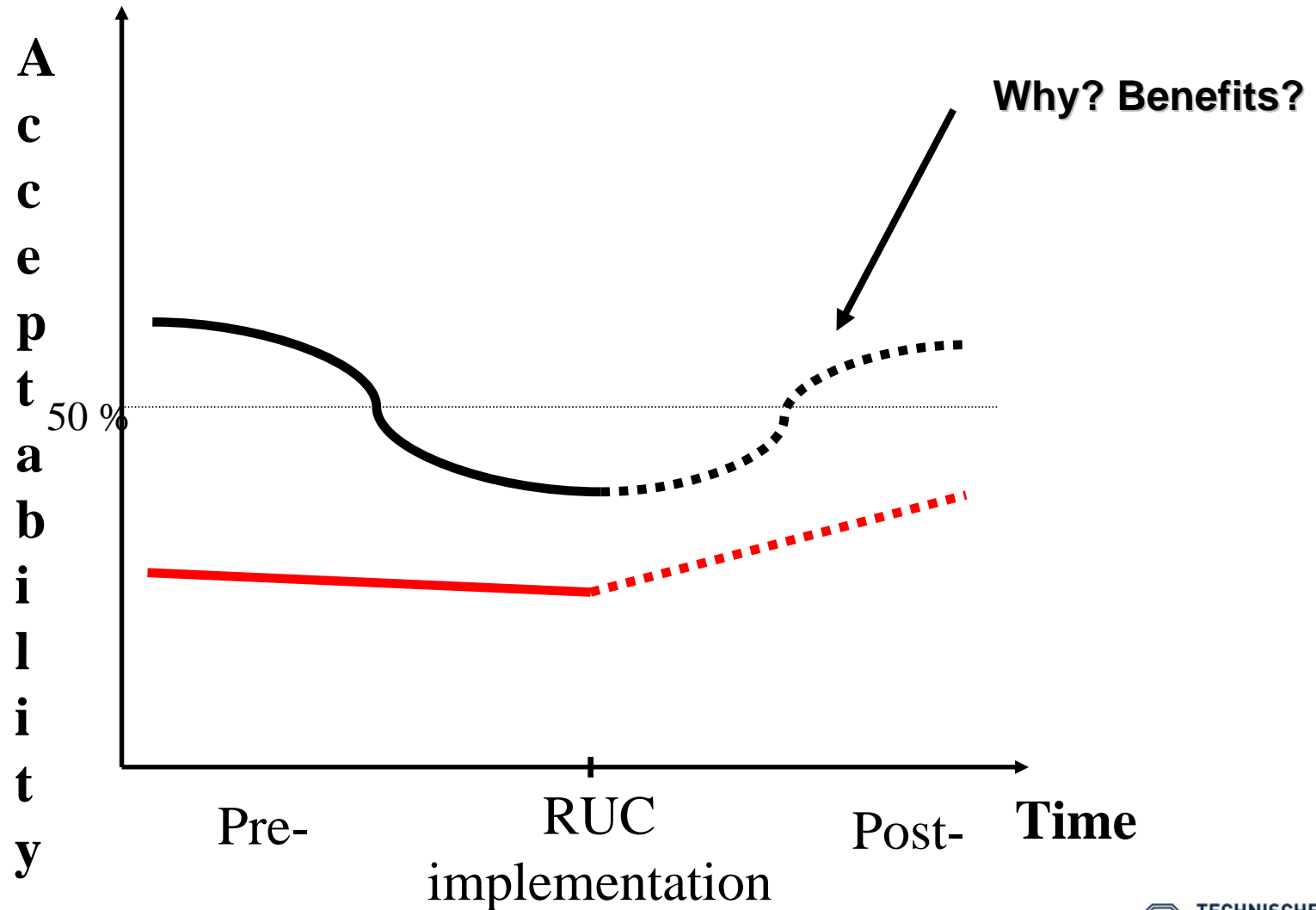
- Negative personal outcome expectations (SEU) dominant (time gains are too abstract);
- „*Radiation Effect*“ of outcome expectations: the more advantages are expected the more fair, effective and socially desired road pricing is evaluated and vice versa!
- Negative social norms, public (and published) opinion against RUC
- Doubts about general effectiveness of RUC
- Clear effect of *pro-social value orientations* („morale“);
- No income effect
- A strong positive relation to own car (and car use), connected to values like freedom, privacy, positive social distinction
- Moderated by system characteristics like charge level, method of charging and revenue allocation (hypothecation), pricing history, objectives, local problems etc.

# Additional Evidence

---

- Acceptability is not static but may be highly dynamical throughout the *pre-*, *decision* and *post* implementation phase.
- Three interesting findings:
  1. acceptability is decreasing the closer and more concrete the proposal gets. In addition, the higher the initial ex-ante acceptability the stronger should be the decrease of positive attitudes in the course of the implementation process
  2. after implementation support increases
  3. once, RUC is decided or looks likely to happen and citizens can no longer avoid it, their attitudes towards charging become more positive (needs to be further validated)

# Possible developments of attitudes towards road pricing



## Alternative explanation for observed attitude changes

---

- According to *cognitive dissonance theory* (Festinger, 1957), there is a tendency for individuals to seek consistency among their cognitions (i.e., beliefs, opinions).
- Dissonance theory postulates that when there is an inconsistency between attitudes or behaviours (dissonance), people are motivated to reduce or to eliminate the dissonance because these inconsistencies cause discomfort.

## Alternative explanation for observed attitude changes (ctd.)

---

- According to dissonance theory the introduction of road pricing evokes feelings of cognitive dissonance. However, this is only the case, if the introduction is (perceived as) *inescapable*.
- On the one hand people favour the status quo without road pricing. On the other hand people perceive that in the future this commitment can not be maintained any longer because the introduction of road pricing is inevitable. This causes strong cognitive dissonance.
- A devaluation of road pricing in terms of negative attitudes would not be an effective strategy to reduce dissonance in the long run. In contrast, the only effective option to reduce dissonance would be to develop more positive attitudes towards road pricing.

# Impact of perceived probability of RUC implementation on acceptability

*J. Schade, M. Baum / Transportation Research Part A 41 (2007) 41–48*

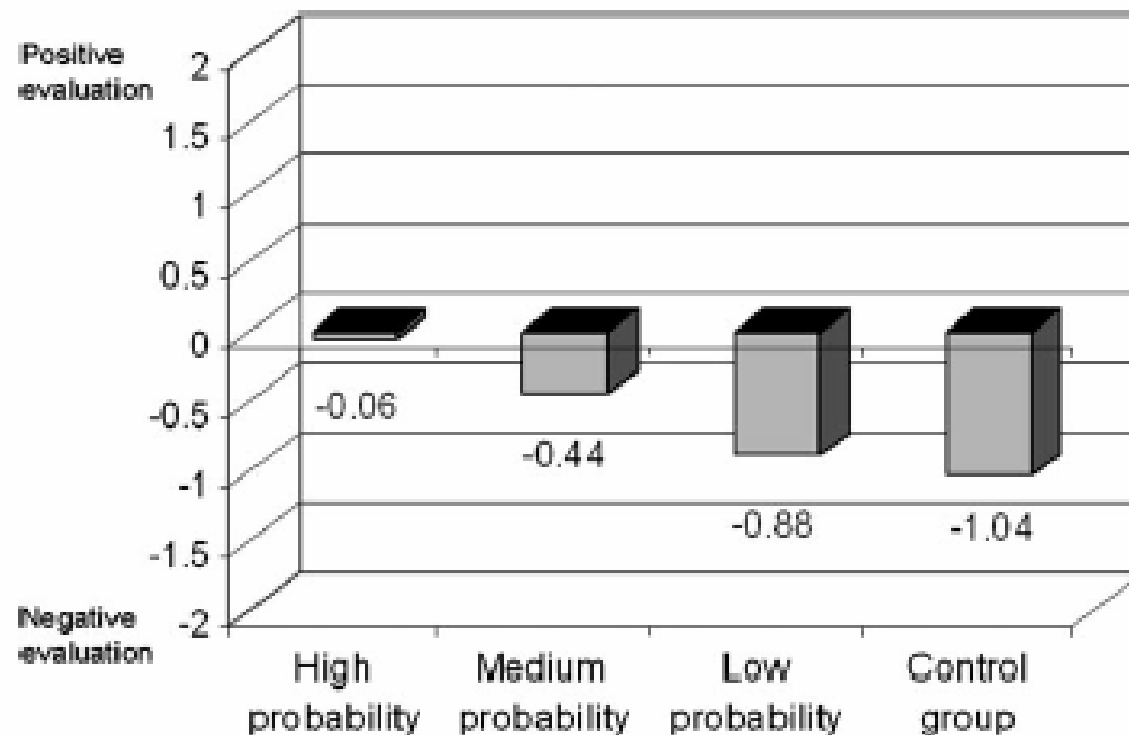


Fig. 2. Differences in the evaluation of the toll depending on the experimental condition (mean values).

# Additional evaluations of road pricing

- Persons who got the impression that the introduction of road pricing is almost inescapable report
  - weaker social norms against the toll
  - less negative emotions like anger
  - a lower importance of toll free use of infrastructure
  - a weaker infringement of freedom
  - weaker motivations (intentions) to defend or restore personal freedom e.g. by taking action against the toll or by evading the toll
- ➔ In sum, results show that persons with a strong conviction about a definite introduction of road pricing exhibit much more positive attitudes towards road pricing than persons who are less certain about a close introduction
- It seems, that people attempt to adapt to the new situation as soon as no real alternative is available. Apparently this applies even to areas where people do not make own decisions

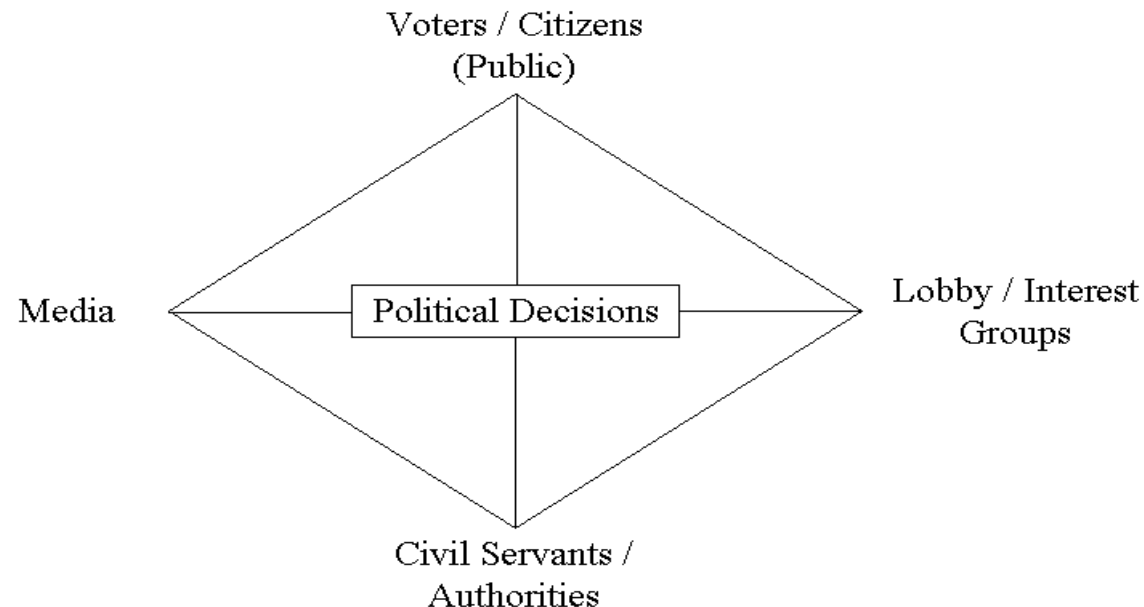
# 3. Some Policy Implications

---

- The **objectives** of road pricing have to meet main public concerns
  - *time gains* are too abstract
  - do not focus on pricing but on traffic problems and solutions people perceive as helpful.
- Transport pricing measures have to be perceived as very **effective** solutions for perceived traffic problems.
- **Revenues** must be redistributed and alternatives have to be provided.
- **Equity/Fairness** needs have to be considered very carefully (distributional as well as procedural, which means forms of public participation).
- Problems which are not an issue in the pre-implementation phase may become more critical the closer the introduction gets (e.g. privacy which relates to technology, reliability, trust)
- Consider to implement RUC for a **limited time** or as a trial (e.g. Oslo, Stockholm)
- **Referenda** are still a game with very high stakes (people have the chance “to escape” ..)

# 4. Research gaps and plans for future research (I)

1. To explore the **dynamic** nature of acceptability over *time* (pre-, decision, post) and different *stakeholders* (e.g. interactions with published opinion / media; influence of hidden groups on the implementation process)



# Plans for future research (II)

---

2. Are **referenda** a promising way to come to the decision to introduce RUC?
3. Considering the social dilemma situation, how to implement RUC against the initial majority of voters and car drivers?

---

# Thank you for your attention

---

# References

---

- Schade, J. & Baum, M. (2007). Reactance or acceptance? Reactions towards the introduction of road pricing. *Transportation Part A*, 41,1, 41-48.
- Schade, J. & Schlag, B. (2003). Acceptability of urban transport pricing strategies. *Transportation Research Part F*, 6, 45-61.
- Schade, J. & Schlag, B. (Eds) (2003). *Acceptability of Transport Pricing Strategies*. Oxford: Elsevier.
- Schade, J., Seidel, T. & Schlag, B. (2004). *Cross-Site-Evaluation of Acceptability indicators*. Working paper. EU-Project CUPID funded by the European Commission under the 5th Framework Programme. Dresden.