

# What Kind of Funding Schemes do Politicians and Other Decision-Makers Prefer?

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## Abstract

This paper will present the results of a study among local decision-makers, politicians and local public administration in the transport sector in Norway. The aim was to find their preferences for alternative financing schemes and different use of policy instruments. The survey was Internet based and designed as a Stated Preference survey. We find that central government is an important contributor to funding schemes, decision-makers prefer positive measures rather than restrictive measures and that decision-makers in public administration are more positive about restrictive measures than politicians.

## Introduction

Lack of government funding in the transport sector has resulted in a wide use of different kinds of funding schemes. Norway has a long tradition of using the revenue from toll roads in combination with other governmental funding, and the debate surrounding other pricing mechanisms, such as transport pricing, is growing. This formed part of the background to the project "*Alternative financing schemes for urban transport*" funded by The Ministry of Transport and Communications in Norway. The aim of the project was to analyse the cost and benefits of setting up different types of financing partnerships in urban areas in Norway, based on a combination of different funding schemes and use of revenue.

As a part of this project, we carried out a survey among local decision-makers (Norheim and Nossu 2005). The purpose of the survey is to chart local decision-makers' preferences for alternative forms of funding and different types of measures, and thus to find out more about trade-offs, priorities and the level of freedom for different policies. Based on the results from the survey, we want to find out the costs and benefits of the different types of funding for the decision-makers.

The survey was limited to local decision-makers in the five largest cities in Norway and deals with alternative forms of funding and measures for achieving better public transport service. This paper describes the design and the main results of this survey.

## The survey

The survey was carried out in the autumn of 2004 among local decision-makers in the five largest urban areas in Norway.

The questionnaires were tailor-made for each decision maker and the survey was carried out as a self-administered Internet survey. The stated preference method was used to find out the decision-makers' preferences for different funding schemes and packages of measures.

The survey also attempted to find the decision-makers' preferences for different measures to encourage a mode shift from car to public transport, as well as the probability of such measures being recommended. Increased toll ring fares, parking restrictions and reduced fares on public transport are examples of measures which were included in the survey.

With the exception of the stated choice sequences, the respondents could reply using a scale of 1 to 9 for the majority of questions. In this way, the respondent had a good chance of expressing his/her preferences. The data was analysed using linear regression and logistic regression.

The different elements of the questionnaire are described below.

1. Respondent's knowledge/experience and main political priorities
2. Preferences for different funding schemes
  - Who should be included?
  - Which measures should be included?
3. Preferences for different transport measures
  - The effectiveness for mode shift?
  - Priorities for implementation?
4. Stated choices
  - Different funding schemes
  - Different combinations of measures

Hvor viktig er det at bilister og kollektivtrafikanter bidrar med midler for at Oslo kommune skal bidra med midler til et slikt spleiselag?  
(Forsøk å angi på en skala fra 1 til 9, der 1 er Ikke viktig og 9 er Veldig viktig.)

	Ikke viktig								Veldig viktig	Bør ikke bidra
	1	2	3	4	5	6	7	8	9	
Bilister	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Kollektivtrafikanter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Neste

Figure 1: Example of a screen picture from the survey.

## Stated Preference method

The Stated Preference method (SP method) is based on hypothetical choices between a number of different alternatives. Traditionally we distinguish between three types of SP methods (Sælensminde 1995):

- contingent valuation method
- transfer price method
- conjoint analysis
  - stated choice
  - rank
  - rate

The advantage of the conjoint analysis in relation to the transfer price questions is that a number of goods can be evaluated at the same time (Sælensminde 1995).

In this study we use stated choices. In the two stated choice sequences the respondent can choose between different "packages" where each package contains a number of different characteristics. The choice of packages forms the basis for mapping the decision-makers' relative priorities between various alternatives.

## Selection and recruitment

The target group were local decision-makers in the five largest urban areas in Norway. Decision-makers are defined as those who take part in the decision-making process in a broad interpretation of the phrase, i.e. county and municipal politicians, administrative staff in counties (regions) and municipalities and the road authorities. We have chosen to limit the survey to a sample of politicians and administrative employees.

The following five cities were included in the survey: Oslo, Bergen, Stavanger, Trondheim and Kristiansand. The decision-makers were recruited by e-mail with a hyperlink to the survey. The link contained hidden information about work place and geographical location. In this way, each respondent received a tailor-made questionnaire, depending on their geographical location and profession. In addition, the levels in the questions about funding and measures varied randomly.

## Response rate

747 e-mails were sent to 547 politicians (73%) and 200 administrative staff (27%) in the five urban areas. A total of 362 replies were received, giving a response rate of 48.5%. The response rate of politicians and administrative staff did not deviate greatly from the total sample and was 47% and 52.5% respectively.

The sample is weighted from the distribution in the original total sample.

## 80% are in favour of co-operation between passengers and authorities for funding public transport services

80% were in favour of the idea of co-operation between the authorities and passengers for financing better public transport services. 15.7% were negative to the idea, while only 4.2% were indifferent.

Of those who are negative to co-operation between authorities and passengers for funding public transport services, 60% say that they do not want to impose higher costs on passengers and 49% say that developing public transport provision should be covered outside public budgets<sup>1</sup>.

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<sup>1</sup> Each decision-maker could state more than one cause.

Those employed in the administration appear to be rather more positive to co-operation between authorities and passengers compared to the politicians.

## Central government is an important contributor in getting local public players to participate in the funding scheme

With regard to the question about the importance of other public players participating in this type of funding, we find that central government needs to be a part of the funding. The local county and the local municipality are also important partners, while other counties and other municipalities are less important (figure 2)<sup>2</sup>

The employees in public administration put greater emphasis on the funding from central government and local authorities contributing to this type of funding scheme than politicians do.

There is a trade-off between funding from public authorities and funding from users. This means that the more important it is that central government, counties or municipalities are part of financing such a package of measures, the less important it is that car users/public transport users are part of the funding scheme<sup>3</sup>.

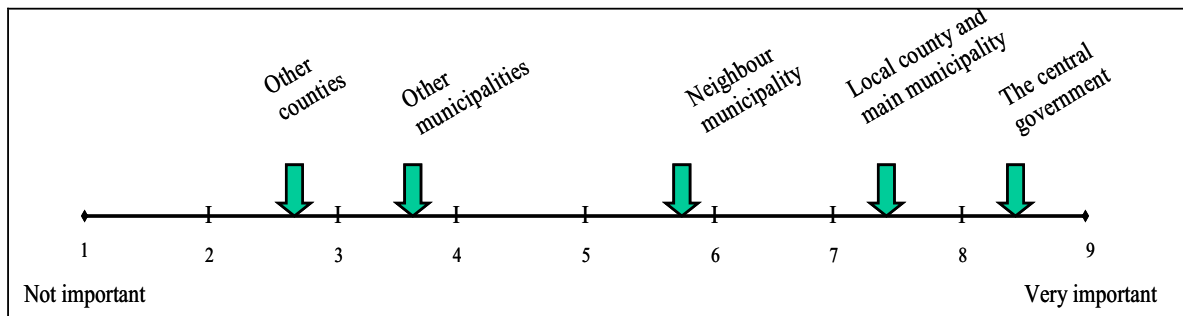


Figure 2: If “your” municipality/county council were to be part of the funding scheme, how important is it that other public players are a funding body? Average score. N=324.

## More important that car users contribute to the funding scheme

It appears to be more important to include revenue from car users rather than public transport users, in order for local authorities to be part of the funding scheme (figure 3).

The administration is more positive to the idea of car users contributing to the joint funding than politicians are.

The local decision-makers in Oslo, the capital of Norway, feel that it is more important for car users to contribute to this kind of funding compared to the local decision-makers in the other cities<sup>4</sup>.

<sup>2</sup> The questionnaire was tailor-made for each decision-maker. The local county and main municipality are the county and the municipality where the city is located.

<sup>3</sup> The connection between the central government and public transport users is not significant.

<sup>4</sup> The connection is only significant for Bergen and Kristiansand.

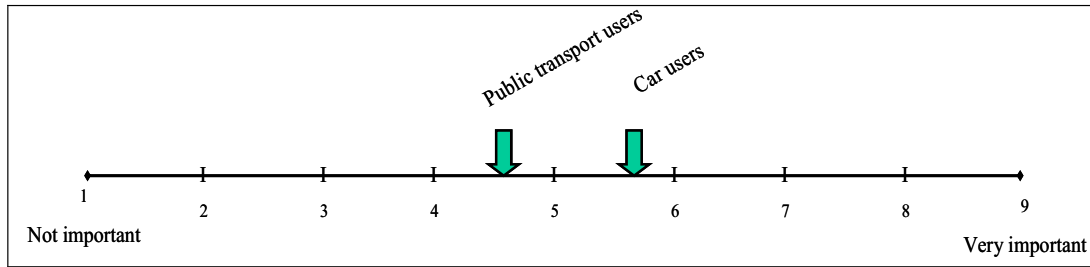


Figure 3: How important is it that road users and public transport users are a part of the funding scheme? Average score.  $N = 316$ .

## Important to implement public transport measures within the funding

With regard to the question of which type of measures the decision-makers regard as being important to implement within the funding scheme, public transport measures are given a higher average score than car traffic measures (figure 4).

Local administration thinks that it is more important that measures affecting pedestrians and cyclists are included in a funding scheme between passengers and authorities than the politicians do.

If there is a positive attitude from the start for funding co-operation between authorities and passengers, then public transport measures will be regarded as more important, than if the attitude to funding co-operation is not as positive from the start<sup>5</sup>.

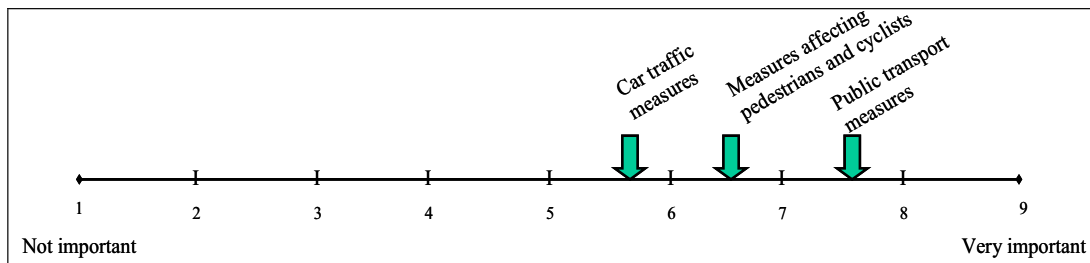


Figure 4: What types of measures are important to implement within a funding scheme? Average score.  $N=305$ .

## Seven concrete measures

Each respondent was offered seven different types of measure:

1. Increasing road tolls
2. Increasing road tolls during rush hour
3. Reduced number of parking places in the city centre
4. Increased parking fees in the city centre
5. Vehicle-free city centres (only residents and goods deliveries may use vehicles in the centre)
6. Better public transport, more departures
7. Better public transport, reduced fares

<sup>5</sup> The fact that we find a significant link between the attitude to funding of public transport measures and not for car traffic measures and measures for pedestrians and cyclists may be connected with the fact that the question on attitudes to funding schemes was based on funding schemes to achieve better public transport provision.

These measures were evaluated on a 9-point scale where 1 is "Not probable" and 9 is "Extremely probable".

Three questions were linked to each measure:

- How probable do you think it is that this measure will lead to increased use of public transport?
- How probable do you think it is that this measure will reduce the number of cars driving into the city centre?
- How probable is it that you would recommend such a measure?

### Car-free city centres have a major effect but are not recommended

When we look at the average score, we see that the car-free city centre is the measure which the decision-makers think has the highest probability of affecting public transport provision and car traffic, while at the same time it is the measure which has the lowest score regarding the probability of decision-makers recommending that it be adopted.

Compared with the other measures, the decision-makers think that only the public transport measures, such as increased headway (more departures) and reduced fares will have an effect while at the same time it is probable that they would recommend such measures. This is linked to the fact that the two public transport measures are the only two in this package which can be regarded as positive for the population. The other five measures must be defined as restrictive measures.

Increased road tolls are the only measure where the decision-makers feel that the probability of recommendation is higher than the probability of having an effect on public transport and car use. This might reflect the funding element of the toll rings in Norway, where the main objective is to raise revenue and not restrictions on car use.

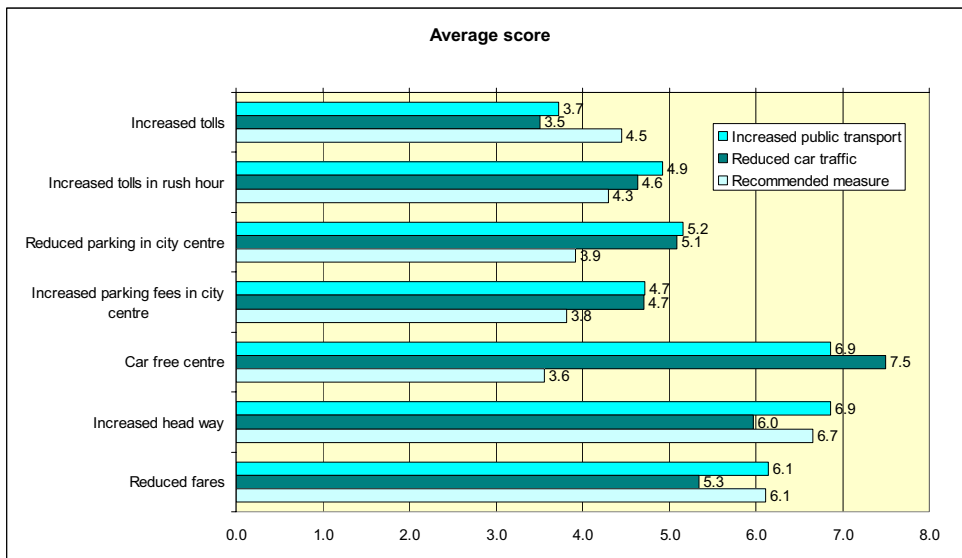


Figure 5: How probable is it that the following measures will lead to an increase in the use of public transport and reduced use of cars and that you would recommend this type of measure?. Average score. N=304.

## ”The administration” is more willing to recommend restrictive measures

Those working in public administration are more willing to recommend restrictive measures than politicians. The two public transport measures, increased headway (more departures) and reduced fares are of a more positive character, and there is no significant difference between administration and politicians in this case.

Employees in public administration have also greater confidence in the effect on public transport and use of cars using restrictive measures compared with politicians. However, only parking restrictions and car-free city-centres have a significant effect.

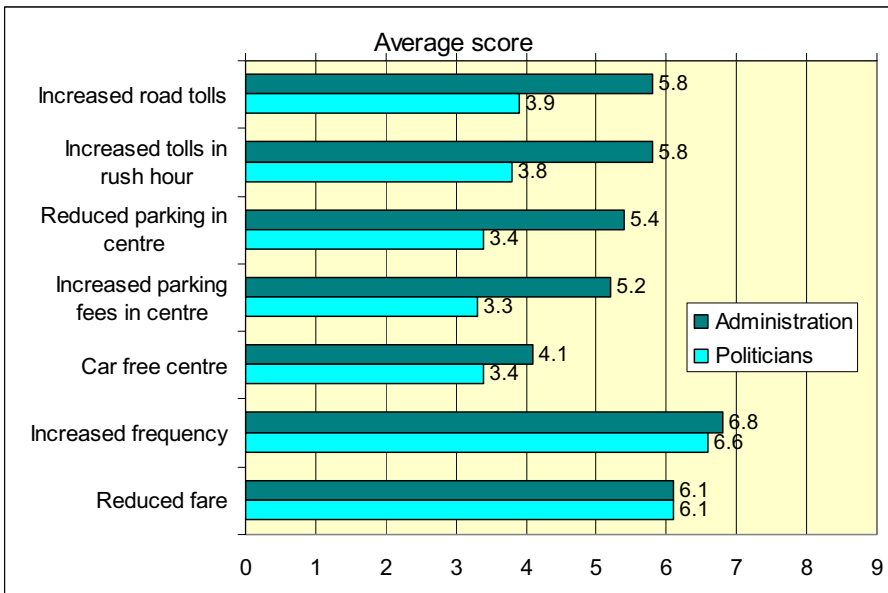


Figure 6: How probable is it that you would recommend such a measure? Politicians and public administration employees. N=304.

## The strength of the measures does not affect the recommendation

One of the interesting findings from this survey is that the expected effect of restrictive measures will depend on the strength of the measure<sup>6</sup>, but not the probability of recommending such measures.

However, for positive public transport measures, there is a connection. Increased public transport fares and more departures will increase the probability of a positive recommendation.

## Different funding schemes

In the first stated choice sequences, the decision-makers had to choose between different funding schemes to achieve extended public transport investments. Funding from central government and local public authorities were a part of all the finance models, but one other local source of funding varied from alternative to alternative. The local sources of funding which were included in the conjoint analysis were: annual licence fee for cars, road pricing, local company tax, contribution

<sup>6</sup> E.g. level of increased road toll and number of reduced parking places.

from the local business sector, increased public transport fares, increased road tolls and “other local public funding”<sup>7</sup>.

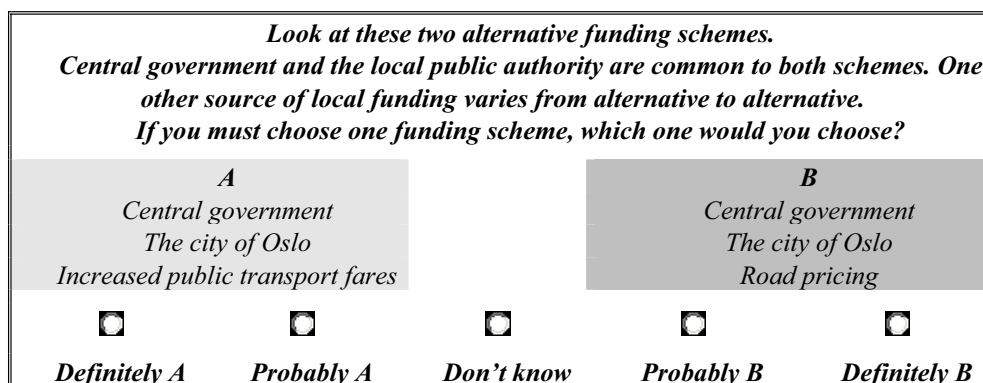


Figure 7: Example from a stated choice for local decision-makers in the City of Oslo. Sequence number one.

The figure shows an example of a stated choice from the first sequence. The respondent chooses between two different alternatives. Based on the choices made, we can chart the local decision-makers' preferences for different types of funding schemes. In the calculations “other public funding” is used as the base level, and the other funding bodies are compared to “other public funding”. We find a resistance to all the sources of funding compared to “other local public funding”.

#### Politicians prefer local governmental funding

Politicians are less positive to all forms for funding compared to administrative staff. This means that they prioritise extra local governmental funding instead of the funding from road users and local businesses. The connections are only significant when it comes to transport pricing, local company tax and toll roads. The administrative employees are more positive to transport pricing compared to the other elements in this sequence.

#### Toll road and transport pricing – same preferences

Norway has a long tradition of using tolls to finance infrastructure, but no tradition of road pricing. Nonetheless, there is no major difference between the preferences for road tolls and road-pricing among the decision-makers. When choosing between road tolls and road pricing, the probability of choosing one rather than the other is not high, with 44% choosing road tolls and 56% choosing road pricing. In contrast, a European study found that decision-makers tend to have preferences for well-known instruments (Link 2003, Link and Polak 2001).

Support for road tolls rather than increased fares in public transport, however, is high, with 75% choosing road tolls in this model.

#### The municipality shows the greatest resistance to funding schemes involving car users

The decision-makers from the municipality show a greater resistance to funding schemes involving car users, than decision-makers from the county authority. These may be toll roads,

<sup>7</sup> This attribute was tailor-made for each decision-maker. For the decision-makers from the county authority, “other public funding” was defined as the local municipality and for decision-makers from the municipality the attribute “other public funding” was defined as the local county authority.



transport pricing and annual licence fees for car. However, decision-makers from the municipality show less resistance to funding schemes that include the business sector compared to decision-makers in the county authority. The resistance to increased fares in public transport is more or less the same in the two groups.<sup>8</sup>

## Combinations of different transport policy packages of measures

In the second stated preference sequence, the decision-makers had to choose between different combinations of measures. The packages were designed so that central government would contribute extraordinary funding for public transport measures if the authorities were willing to introduce a restrictive measure for car traffic, which can be justified to a greater extent by local commitments linked to state financing.

*Imaging that central government is willing to contribute extraordinary funding for a concrete public transport measures providing you are willing to introduce a restrictive measure on car traffic.  
In both alternatives there is extraordinary funding from central government.  
The restrictive measure on car traffic and the public transport measure vary from alternative to alternative.*

*If you must choose one alternative, which one would you choose?*

<i>A</i>			<i>B</i>	
<i>Extraordinary funding from central government</i>			<i>Extraordinary funding from central government</i>	
<i>Increased road toll in rush our</i>			<i>Reducing number of parking places</i>	
<i>Investing in new rolling stock</i>			<i>Increased headway</i>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Definitely A</i>	<i>Probably A</i>	<i>Don't know</i>	<i>Probably B</i>	<i>Definitely B</i>

Figure 8: Example from a stated choice sequence number two, choosing between two alternatives of measures packages.

The figure shows an example of a stated choice from the second sequence. The respondent chooses between two different alternatives. Based on the choices made, we can chart the local decision-makers' preferences for different types of measures.

Increased road tolls in the rush hour and increased parking charges are better than a general increase in road tolls

Of the restrictive measures, decision-makers regard increased road tolls in the rush hour and increased parking charges in the city centre as significantly better than increasing road tolls across the whole 24-hour period. Reducing the number of parking places in the centre and taxation on free parking at work do not differ significantly from increased road tolls throughout the whole day. However, increased road tolls in the rush hour only are significantly better than taxation on free parking at work.

<sup>8</sup> The differences between the local county authorities and the local municipality are not significant

Operation and accessibility are prioritised above investment in new rolling stock

The three public transport measures, increased headway (more departures), reduced fares and priority measures, are significantly better than investing in new rolling stock. These three attributes are valued approximately equally, and are not significantly different from each other.

20% would choose a package which includes greater headway

20% would choose an alternative which includes greater headway (more departures) by public transport as part of the package, no matter what the other elements of the package may be. Around 17% would choose a package with reduced fares or priority measures.

Support for packages which include taxation on free parking or a reduced number of parking places is low. The probability of choosing packages with increased parking fees and increased road tolls in the rush hour, however, is somewhat higher (around 11%).

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