

Summary:

Quality Contracts in Kristiansand?

Discussion of output-based subsidy contracts

What is the most effective socio-economic subsidy contract?

The guiding principle of this project is that it should be possible to develop quality contracts for public transport in Kristiansand that promote both X-efficiency and market efficiency while relying on the commercial interests of the companies concerned. Key issues in this respect are the level and principle of allocating subsidies. If the level and quality of services shall be left for transport companies to decide, a major problem is related to how the benefits to existing transit users from improved services shall be internalised in the accounts of public transport companies.

The approach taken to this problem is as follows: We use a model that captures the essential features of the cost structure, demand and constraints facing a public transport company. This model is used to find the level of services and fares that maximise net social benefit. The solution is used to test alternative subsidy schemes subject to the condition that the transport company shall provide the level of service that maximises profit.

From this exercise we conclude that a proper subsidy per revenue kilometre and revenue hour supplemented by some additional measures will provide the appropriate incentives. In many respects these subsidy contracts may be regarded as a further development of the efficiency agreements which have existed in the county hitherto, but with greater importance attached to market *efficiency*.

Challenges facing public transport in Kristiansand

The future challenge to public transport in Kristiansand is to maintain or increase the present market share at the expense of the private car which, particularly in the urban area, results in considerable costs for society both in economic and environmental terms as a result of queues, noise, air pollution and traffic accidents. It is therefore important that public transport services are efficient and supply an optimal level of service. The greatest challenge in the future will not be to operate present services as cheaply as possible, but to develop the best possible and competitive service within the financial constraints facing the sector. The development of such a service will take time.

Simultaneously, the public transport system is dependent on a continuous and targeted product development in order not to lose its market share. An analysis of the development of public transport in the 10 largest urban areas in Norway revealed that if the services were maintained at current levels the number of

passengers would decline by 1.6 percent per annum. This suggests that public transport in Kristiansand is extremely open to competition, which is entirely dependent upon a subsidy contract, which provides the opportunity for a targeted product development.

At the same time there is no competition for the access to the market in Kristiansand. This is a protection for the companies that must not be a form of “cushion” for the public transport company, BTS. It is therefore important to develop subsidy contracts containing threatening competition, i.e. open up for competitive tendering if BTS does not fulfil the defined demands for quality prescribed in the contract. Which demands for quality are to be prescribed must be determined by the authorities.

Both domestic and international experience indicates that competitive pressure can be much more effective than competitive tendering. This is particularly important when the overall objective is a continuous and targeted product development, and a more effective use of those resources used for public transport purposes. At the same time threatening competition will provide the possibilities for longer subsidy contracts and increase the degree of freedom for the companies.

The question as to how public transport shall be organised and financed in the future is thus initially dependent upon the organisation form, which is best, suited to attain the overall objectives of regional transport policy. What, in the short term, will contribute to lowest costs or subsidies, will be of secondary importance if these simultaneously change the opportunities for a continuous and targeted product development or a co-ordination of the product. The choice of organisational framework will thus largely be a question of strategy for the development of public transport in both short and long terms.

The best possible organisation and financing of public transport for Kristiansand in the future is that which unites a socio-economic and a commercial objective for operations, i.e. which provides the possibility for a decentralisation of the decisions made at the company level without that this is at the expense of the overall objectives of public transport in the county.

The need for a more defined division of responsibility

Experience from other countries shows that those public transport companies which have long-term and predictable external constraints have also managed to develop the best services. Both long-term investments and possibilities for a re-allocation of resources over time can provide the basis for a more effective use of subsidies to public transport.

The introduction of “output-based contracts” demands a relatively clear and quantifiable definition of the goals, and agreement on the indicators used in measurement. By “output-based contract” we mean a contract where:

- Subsidies to the company are dependent upon the achievement of output.
- Reward or penalty will encourage the company to strive towards the authority’s specific goal.

- The company has the liberty to find the best service level in on order to achieve those goals.

International experience indicates that most countries are searching for alternative models with respect to organising and financing of public transport. There are, however, new initiatives and organisation forms and contracts, which are of great interest for the development of new contractual forms in Kristiansand. Increased focus is put on who is having the responsibility for the market initiative regarding planning and development of improved service, both on strategic, tactic and operative level. Contracts are being developed where the division of responsibility is clearly defined between authorities and operators. The authorities emphasise the long-term strategic level, while the tactic and operative level more and more are turned over to the operators.

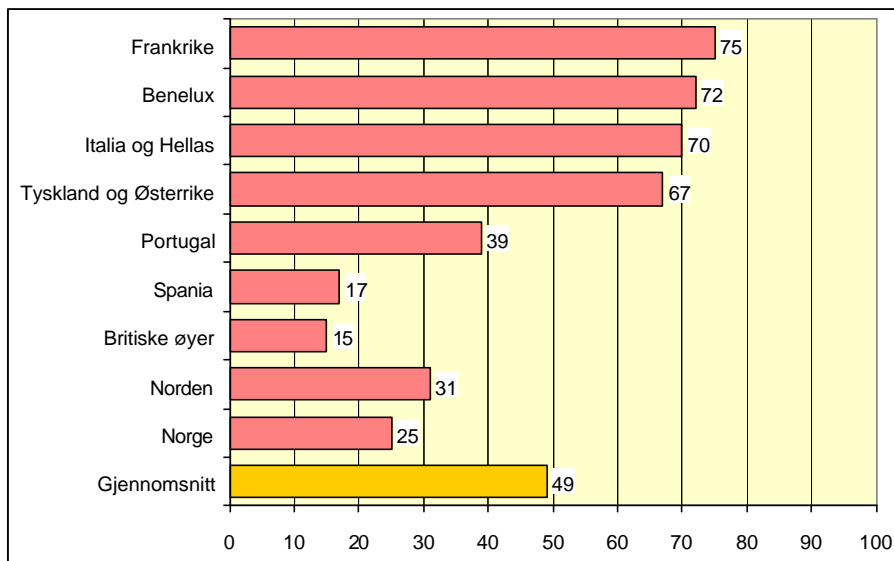
There are three examples of organisational forms, which first of all are referred to in international reports. Some reasons are that these models have quality in focus and that they give the operators increased responsibility for planning and development of service:

- Helsingborg model from Sweden
- Quality Partnerships from Great Britain
- Incentive contracts.

In the quality contract for Kristiansand, we have emphasised on further development of the best from these organisation models, adjusted to local conditions. Our suggestion in this connection is that the contracts clearly define the authorities' responsibility to arrange for the fulfilment of the contract. Additionally, the operators should act independently with respect to planning and developing of the service, while the authorities set definite terms for the development of this measure.

Reduced subsidies to public transport

Public transport in many Norwegian urban areas is operated with steadily declining subsidies from the public sector. Among other things this is the result of reduced transfers from the state to the counties, increased use of efficiency agreements, and the threat of competitive tendering. On a national level, the annual subsidies to the public transport companies has been reduced by about 1.2 billion NOK at 1997 levels in the period 1986 – 1997, a reduction of 42 percent in fixed prices.



Figur S.1: Subsidies to public transport in Europe 1995. Bus service. Source: ISOTOPE

The figures for Norway cover bus routes both in rural and urban areas, while the ISOTOPE figures only cover urban bus transport. The subsidy rates for urban transport in Norway are in most cases lower than for transport in rural areas. Cost coverage for Norwegian cities are well below the European level. We have earlier analysed the consequences of changed framework conditions in five urban areas – Oslo, Bergen, Trondheim, Kristiansand and Tromsø. Four of these cities had in the period 1987-97 their subsidy rates reduced by from 15 to 56 per cent points. Kristiansand was the exception, with an increase in subsidy rate from 20 to 27 per cent.

This assessment reveals that over the period studied, Kristiansand has increased cost-efficiency substantial, and this is at the same level as the cities that have reduced subsidies. This shows that relatively high or increasing subsidies for public transport not necessarily implies that the operation is not X-efficient. Compared to other cities both in Norway and abroad the operation seems to be cost efficient today and the potential for further cost reductions without reduced quantity and/or quality is limited.

An overall review of the five urban areas shows that of the total subsidy cut of NOK 592 million, net savings are only NOK 135 million (22 per cent) when we take into consideration the increased costs for other actors (Table S.1). This suggests that 78 per cent of the subsidy reductions have been distributed as NOK 77 mill. (13 per cent) as a consequence of increased road traffic, NOK 33 mill. (6 per cent) as reduced service frequencies, and NOK 347 mill. (59 per cent) as increased fares. In addition to the fact that reduced subsidies led to a 7 per cent decline in the number of passengers, the remaining passengers have experienced a 25 per cent higher fare level. A significant proportion of the reduced subsidies have thus been “financed” by the passengers, thereby weakening the competitiveness of the public transport sector. This may in the long term result in a further decline in the number of passengers.

Tabell S.1: Costs and benefits induced by changes in the public transport sector, 5 cities. Mill 1997-NOK

5 cities	1986-92	1992-97	1986-97
Change in subsidy	-462	-129	-592
External cost car use	45	32	77
<i>Cost for o.t. users</i>			
Change in travel time	-19	-12	-31
Reduced frequency	-	33	33
Increased fares	251	96	347
Net savings	-185	20	-166

Negative numbers are benefit, positive numbers costs.

Our analyses also show that in the first part of the period, up to 1992, the transport companies experienced a real efficiency gain while after 1992 the costs have largely been passed on to the passengers. When we regard all the five urban areas together, there has been an efficiency loss of NOK 32 million after 1992. These calculations show that there has been a considerable potential for efficiency within the sector, but that this was essentially reaped before 1992.

In many respects Kristiansand distinguishes itself from the other urban areas because the subsidies have increased rather than decreased. This means that we have studied socio-economic gains of increased expenditure on public transport in contrast to the other urban areas where we have observed a net saving as a result of reduced subsidies. This analysis shows that the increased subsidies totalling NOK 10 million annually have resulted in a socio-economic gain of NOK 31 million, of which 2/3 may be attributed to increased frequencies and 1/3 to reduced fare levels.

Experience from Kristiansand shows that the increase in subsidies to public transport has resulted in significant economic gains, and when measured in terms of passengers, the gains are the highest of all areas in this analysis. Our analyses have also shown that together with Oslo and Trondheim, Kristiansand has carried out the largest cost-effective exercise among all the towns we have examined, amounting to a gain of about 20 per cent. This signifies that public transport in Kristiansand, both commercially and socio-economically, has experienced the most effective transformation during the period under survey.

Table S.2: Socio-economic effects of changes in the public transport sector. Million 1997 NOK

Changes 1986-97	Oslo	Bergen	Trondheim	Tromsø	Kristiansand
Subsidy reduction	-353	-115	-120	-14	10
Costs of increased road traffic	34	40	6	-1	-1
<i>Costs for passengers</i>					
Increased travel time		-31			
Reduced frequencies	-10	27	4	31	-19
Increased fares	188	130	26	14	-11
Net savings	-141	51	-84	30	-21

Experience from Kristiansand shows that the increase in subsidies to public transport has resulted in significant economic gains, and when measured in terms of passengers, the gains are the highest of all areas in this analysis. Our analyses have

also shown that together with Oslo and Trondheim, Kristiansand has carried out the largest cost-effective exercise among all the towns we have examined, amounting to a gain of about 20 per cent. This signifies that public transport in Kristiansand, both commercially and socio-economically, has experienced the most effective transformation during the period under survey.

Proposal for quality contracts for Kristiansand

The Institute of Transport Economics has undertaken analyses of the new subsidy contracts for Kristiansand, both in the long and short terms, depending on the level of freedom in the contract. This applies both to the financial constraints and the division of responsibility between the authorities and the companies. One main conclusion of these analyses is that an increasing number of restrictions within the contract will decrease the net potential benefit from the reorganisation. At the same time it is not necessary to undertake a complete restructuring of the subsidy arrangements in order to acquire a significant socio-economic gain from output based subsidy contracts. However, certain strategic decisions must be undertaken in the short and long terms in order to benefit from the new contract.

Those analyses, which have been carried out, suggest that it is possible to develop a subsidy contract that can combine commercial profit and socio-economic efficiency. The output-based contract contains of the following elements:

1. Framework and quality demands of the authorities
2. Performance related subsidies
3. Conditions for fulfilment of the contract
4. Proposals for transfer to new arrangements.

Framework with minimum demands on quality of services

We propose that the county council by VAK defines a framework for the contract for those minimum demands for quality of service, which have to be fulfilled. The framework for the contract should consist of overall quality requirements regarding price, service and accessibility that the authorities require to be included.

The following elements can be included within such a framework:

- *Net contact* with income responsibility for the companies.
- Establishment of an on-going *travel quality survey* used as a quality indicator and where the contract may be terminated or renegotiated if the indicator falls under a certain level. The surveys carried out in the year 2000 provide the basis for the base level.
- The authorities to have the responsibility for defining the fare structure and for differentiating fares within this level.
- The companies to receive the responsibility for providing on-going tertiary reports on central *key statistics for the quality of the services* concerning:
 - route kilometres – basic service and rush-hour extra services
 - number of stops
 - frequency

- reliability
- patronage
- revenue.

Performance-related subsidies

Within this framework the county authorities can enter into a performance-related subsidy contract with the companies where the main elements are:

1. The companies receive a fixed subsidy per bus kilometre
2. The subsidy level is different between peak service and the rest of the operation
3. In addition will they receive a fixed subsidy per journey for peak passengers
4. The companies are free to decide the optimal service level according to the revenue and output based subsidies, according to their commercial profit
5. The agreement between the county authorities and the companies initially applies for 4 years, but with a clause on index regulation and subsidy rates during this period of agreement.

Specified conditions relating to fulfilment of contract

An output based subsidy contract will be more demanding for the companies as it will place more focus on product development according to passengers' expectations and needs. Simultaneously, the external framework, both for cars and public transport, could largely influence this passenger development. It is therefore important that the contract contains a mutual obligation between BTS and VAK to the agreement and the county authorities, to ensure that the conditions are set such that the contract may be fulfilled as satisfactorily as possible.

Proposal on the transitional arrangements

This is a demanding contract for BTS in so far this requires a close market understanding, both of its own cost structure, and not least factors on the demand side. The output based contract stimulate improved services, but simultaneous to more cost efficient service capacity.

An assumption for achieving the full effect of this type of model is that it provides long-term and predictable frameworks and room for re-allocation of services and the bus fleet. The contract will, in a way, decentralise the decision level to BTS. This increased level of freedom implies, however, increased responsibility for their own economy.

As a transitional arrangement, we would suggest that the contracts are based on today's service and subsidy level, and that the output based subsidies cover *changes* in relation to this level. Such a transitional arrangement provides greater predictability for the county authorities, and a more gradual adjustment for BTS in the short term. It is important that the VAK have a bonus that can cover the increased costs.

Consequences of a new subsidy contract

The consequences of a new subsidy contract are increased focus on market development and how to attract more passengers. The most innovative companies will have the most to profit by the new contracts, while those who continue to operate according to current service levels will find their income base reduced. We have undertaken analyses of the consequences of the new output based subsidy contracts, which reveal a good potential of such contracts in Kristiansand.

