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SUPERINCENTIVE PUBLIC TRANSPORT CONTRACTING IN THE GREATER AMSTERDAM AREA

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ABSTRACT

All suburban/regional bus services around Amsterdam City have been submitted to competitive tendering. This is done under a very innovative form of revenue-based contract that can be classified as a 'super incentive' contract. Payments to operators ('subsidies') are based on realised passenger revenues and no longer on the costs of supplying public transport. Because of the fact that fare increases are regulated by the authority, increase in revenues can only be achieved by an increase in ridership, which is one of the main long term goals of the authority. At the same time, and to provide for a well-balanced contract, operators are also allowed to re-design services within some strict boundaries set by the authority (such as a detailed minimal level of supply). The awarding procedure was designed such as to lead to a high level of self-regulation, preventing bidders to exaggerate their revenue growth forecasts at tendering in order to win the contract. This paper presents the contractual features and the design of the competitive tendering process that has led to the calibration of the superincentives given to the operators. It also presents the results achieved in terms of passenger growth.

INTRODUCTION

Context

The Dutch public transport legislation requires competitive tendering and does not allow the usage of negotiations for contract award. The only exception to this will be the possibility to award concessions (contracts) to in-house operators in cities owning a public operator. This exception will soon be implemented in Dutch law.

One of the main goals of the current Dutch law is to reduce direct political influence in such a way that everyday problems does not influence long term policy goals too easily. This has to do with the tendency of some city councils to overvalue the needs of the last single passenger and to undervalue the needs of the majority. As opposed to this, long-term goals are supposed to be an increase in ridership and a higher level of cost coverage.

The new legislation resulted in a situation in which the Netherlands are divided into about 70 concession areas. Concessions are areas in which a public transport operator has a temporary monopoly for usually 6 to 8 years. This exclusive right is submitted to competitive tendering. Tendering is conducted by one of the 19 transport authorities.

The largest authority, in terms of turnover and subsidy, is the transport authority of Amsterdam (*Stadsregio Amsterdam – SRA*, City Region of Amsterdam). It comprises 4 concessions: Amsterdam, Amstelland-Meerlanden (including Schiphol airport), Waterland, and Zaanstreek. The city councils of the 16 municipalities in the Amsterdam region elect a regional council. The regional council elects a Daily Board, which is the political daily management of SRA. SRA's administrative departments subsidize public transport operations as well as infrastructure maintenance and infrastructure investments. The total budget is of around € 400 million per year, out of which € 225 million is paid to public transport operators. In this amount a compensation for rolling stock depreciation and interest is included. Passengers yield € 175 million each year.

This paper will focus on the revenue-based 'super-incentive' concession contracts of SRA, except that of Amsterdam (city centre) which has not been tendered.

Towards a new approach

The situation in the public transport market in the SRA area around Amsterdam City Centre was similar to many European (medium-sized) cities. SRA favoured the use of net cost contracts and compensated the deficit between costs en revenues. Although the revenue risk was born by the operator, it was perceived that the use of these contracts continued to lead to a high focus on supply, rather than on demand, on the part of the operator. No sophisticated marketing to attract more passengers could be observed and as a result no growth nor in revenue nor in patronage was observed. This was deemed to be closely linked to the functioning of the net cost contract that actually rewarded cautious or lazy behaviour. The net cost contract had a double negative incentive and consequently resulted in a downward spiral from SRA's point of view: higher cost as well as lower revenue both had to be 'rewarded' by a higher subsidy. Sometimes higher costs caused for example by inefficiency on the part of the operator, occurred at the same time as a decrease in revenues caused for example by lower (perceived) quality.

Even worse, sometimes rising costs were countered by the operator with lowering quality with decreasing revenues as a result. No incentive existed for the operator to (try to) increase revenues as a measure to counter rising costs. SRA thought that a new approach needed to be sought for.

SRA started to ponder on the ideal regulation of the public transport market. In the view of SRA, a public transport operator has to focus on passengers and their needs. Put differently, the operator has the responsibility (even the moral duty perhaps) to develop the market. On the other hand SRA may set a minimum level of supply in its contracts and set social goals (for example accessibility requirements for vehicles).

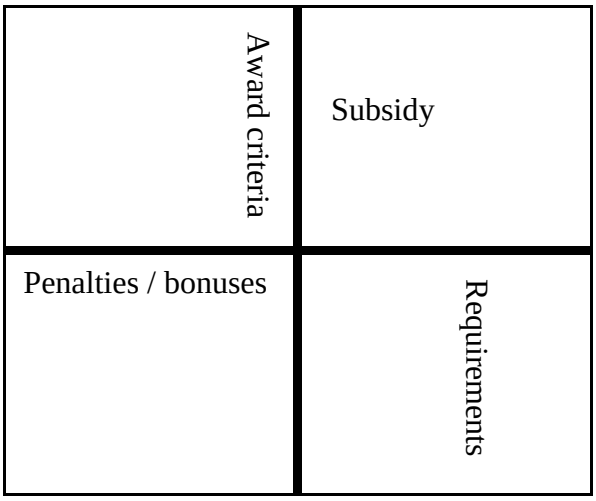
The goals of an authority can be high patronage, attention for the needs of passengers, and active marketing by operator (which in fact should not be a goal but a means to an end but is often regarded as such). The goals of an operator are different, such as striving for (high) profit, for a good relationship with the tendering authority and for a good working environment for its employees. As for all contracting, the challenge for SRA was to unite the goals of the authority and the goals of the operator into one contract and tendering process.

An authority has several instruments to influence the operator in attempting to get him to work for its goals. Those instruments can be applied during tendering or during the contract period. SRA opted for a limited (but smart) regulation both during the competitive tendering of the PT contracts and also during the contract period itself. It is important to distinguish those two: the moment of tendering and the contract itself. During the tendering process bidders make their promises while during the contract they have to make them true. The trick is to interrelate the tendering process with the contract.

On the one hand the instruments that can be used during tendering are award criteria and requirements. On the other hand instruments with which to direct the operator towards realising his promises are penalties and bonuses as well as the basis on which the subsidy is calculated. That last one is very important, appear to be often neglected by authorities although it is a very strong instrument.

These instruments can be presented in a diagram. Each quadrant represents the interrelationship between two of the instruments that can be used during tendering and during the contract period. In the experience of the main author, it is advisable to include each quadrant in both tendering documents and contract.

While the relationship between award criteria and penalties/bonuses as well as the relationship between requirements and penalties/bonuses are well-known, authorities seem much less aware of the relationship between subsidy and award criteria as well as requirements. This is probably also why this relation is not often used to the authority’s advantage.



Subsidy can be based either on costs, revenues or the difference between these two. As said above, a subsidy based on the deficit has a double negative incentive for the operator: if costs rise and revenues plunge, the operator will still earn his money through the subsidy. A subsidy based solely on costs does maybe not have such a strong negative incentive but will inevitably result in a strong focus on costs and supply, not so much on revenue and demands of passengers; enter the revenue based contract.

The choice made by SRA was to use a revenue-based contract, as a version of a super-incentive contract, combining a positive incentive with a high focus on demand. The subsidy is based on revenues with fare increases regulated. This was designed such as to lead the operator to feel a strong incentive to increase demand, hence revenue, hence subsidy. This contract was designed to be self-regulating as no performance means no passengers, means no turnover and no subsidy, while high performance means high ridership, resulting in high revenues and subsidy. An important point is that, without counteracting forces, this might end up into sky-high subsidies. This was countered by using competitive forces, available through competitive tendering.

Super-incentive contracting

In more detail the contract functions as follows. The total available subsidy is mentioned in the tendering documents. The bidders are then asked to make a bid for the level of revenues they think they can achieve during the contract period. The total available subsidy per year is then divided by this revenue bid for each year. In this way a so called subsidy factor is calculated. During the contract period the actual subsidy that is to be paid by the transport authority is calculated by multiplying the realized revenue, and not the offered revenue, by this subsidy factor.

This contract therefore has a very high level of self-regulation. When bidders exaggerate revenue growth during the tendering phase, they now that this would result in lower actual subsidization during the contract period.

Example

Year	Offer	Subsidy factor (maximum subsidy / offer)	Realization	Subsidy (realization × subsidy factor)
1	45	(100 / 45) = 2,2	45	(45 × 2,2) = 100
2	50	(100 / 50) = 2	45	(45 × 2) = 90
3	55	(100 / 55) = 1,8	50	(50 × 1,8) = 90
4	55	(100 / 55) = 1,8	60	(60 × 1,8) = 108
Maximum subsidy: 100				

The table shows that not making true promises as is the case in year 2, leaves the operator with less subsidy (90 instead of the expected and available 100), while doing better than expected (year 4) results in a higher subsidy than expected (108 instead of 100). The last situation is only possible, however, after a few years of underperformance. In this example the maximum available subsidy normally is 100.

This contract was designed to give operators a big incentive to seek market demand and develop initiatives. For a good functioning of this type of contract service re-design is therefore allowed. The operator is allowed during the contract period itself to alter his original service bid in design, and in quantity, in order to answer to new or changing demands of passengers. The freedom to alter quantity is limited however. Reducing supply beneath the original offer is only accepted when the passenger advisory committee agrees. This is not as rare as might be expected. Normally reduction of supply on one bus line has to be compensated by an increase on another. The municipalities also have the right to come forward to the operator with service ideas or special fares to attract more travellers. Before any modifications are introduced, the authority and the operator first have to try to come to an agreement. Experts will judge advices given by the passenger advisory committee as well as political advisory committees. The authority will come to a conclusion in the case of a disagreement and determine whether the modifications are allowed.

CONTRACT PERFORMANCE

Tendering strategy Zaanstreek concession and Waterland concession

The objectives for tendering the concession of Zaanstreek (2004) and the concession of Waterland (2005) were quite similar. In both cases SRA set a minimum level of supply and searched for higher levels of:

- Network coverage
- Cost coverage
- Quality and comfort of buses
- Passenger information
- Accessibility

Apart from these SRA also had objectives in terms of process. The process had to be:

- Objective

- Transparent
- Non discriminatory

But SRA also looked for enough competition during tendering, which was somewhat of a challenge with only three active operators in the Dutch public transport market. Besides, the Daily Board expressed a wish for the limitation of risk of a law suit and wanted to reduce the unpredictability of the outcome of the tendering process. Finally as stated before SRA tried to limit (but smart) regulation during tendering of PT contracts as well as during the contract period itself.

SRA chose to use the revenue based contract. Necessary part of using the revenue contract is leaving room for the operator to develop the market during the contract period. That implies tendering the whole network and having limited functional requirements during tendering. Other characteristics of the schedule of requirements were a limited minimal level of supply in order to allow the bidders to search for the right (amount of) supply given the (current) demand.

Unpredictability for decision-makers, Daily Board and Advisory Committees made up of aldermen and passengers, was reduced by adding a few technical requirements (e.g. one bus line has to serve the hospital) and the use of a quantitative/mathematical evaluation method of the bids.

The operator is responsible for all costs. The contract allows for the operator to receive its own benefits and also to receive its benefits multiplied with the subsidy factor. This means that theoretically the operator is 100% responsible for its own income. However, due to a substantial level of captive passenger, the variable allocation of 100% is not as variable as it seems and a certain amount of revenue is rather ‘fixed’ due to market conditions.

The contract was awarded on the basis of additional supply above the minimal requirements and on revenue growth, hence ridership growth. The contract was awarded on the basis of an interdependent series of criteria. First, bidders had to express their vision on the public transport market at hand. Next a marketing plan, comprising of product, promotion, people, place, and price (the last very briefly due to strict regulation of fares) fit to the vision was asked for. A detailed description of the product (the transport plan and timetable) was the next part of their bid. Further they bid for quality or comfort of buses. Last, but certainly not least, bidders had to bid for the revenue they expected to make during each year of the six year contract.

Tendering results Zaanstreek and Waterland

The best and final offers for Zaanstreek and a year later for Waterland were impressive.

- 20% (Zaanstreek) to 50% (Waterland) higher supply
- 25% (Zaanstreek) to 35% (Waterland) higher revenue
- New buses (both)
- Fully accessible buses (both)
- Better passenger information (both)
- 10% less subsidy needed (no result but set upfront)

The tendering process was less successful. The terms of reference were very complex. Bidders experienced difficulties in trying to understand what SRA was really asking for. It is unclear if this was causing reluctance to bid or if other factors caused that but the fact is that the Waterland tender only received two (very competitive) bids. Besides, the complex terms of reference, this also resulted in complex bids and a complex evaluation of the bids resulting in lots of work for SRA's civil servants. Also decision-makers and advisory committees had a hard time dealing with the perceived unpredictability of the outcome of tendering. Afterwards, the complex evaluation of especially the Waterland bids resulted in a near law suit by the losing bidder. The losing operator had no real ground so the case was dropped. And finally the large growth in supply as well as deployment of a completely new fleet led to a difficult transition from incumbent to new operator.

Tendering strategy Amstelland-Meerlanden

The tendering processes of Zaanstreek and Waterland were evaluated. The evaluation proved that:

- the combination of functional and technical requirements was too complex
- the method used for the quantitative judgment of the bids was too complex
- the incumbent operator had a knowledge lead
- (and therefore) new operators set the previous timetable as standard
- the terms of reference had limited degrees of freedom as opposed to the intentions it was written with.

The challenge was to maintain the good results in supply and quality of the bids but to improve the tendering process. SRA felt it had to choose between either even more freedom during tendering but therefore higher unpredictability or less freedom and easier to manage from SRA's perspective.

SRA chose the last option and the tendering strategy for next concession (Amstelland-Meerlanden) was based on the idea of 'controlled competition'. Market forces can do their work but some strict boundaries are maintained by the Daily Board, for example a detailed minimum level of supply. Within these boundaries however a high level of freedom for public transport operators is created to develop their products with a high focus on market demand. This is achieved by defining an integrated network with limited but detailed minimal requirements, combined (still) with the revenue-based contract.

Technically spoken the schedule of requirements had less functional requirements and more technical requirements. This limited the freedom during tendering. The schedule of requirements, therefore, was fundamentally different form those used in the tendering of Zaanstreek concession and the Waterland concession. The contract itself, however, maintained large degrees of freedom during the concession period. In this respect there was no shift from the contract used in the Zaanstreek concession and the Waterland concession.

Tendering results Amstelland-Meerlanden

The new Amstelland-Meerlanden approach resulted in an easier tendering process, less unpredictability for decision makers and advisory committees and in a more level playing field.

Results in offered supply remained high. Maybe even higher than in the Zaanstreek and Waterland cases, but this might have been caused by the fact that the Amstelland-Meerlanden concession apparently had a high strategic value for the incumbent operator. Connexxion remained operator and offered:

- 60% higher supply
- 50% higher revenue
- New buses
- Fully accessible buses
- Environmentally friendly buses
- Better passenger information
- 5% less subsidy needed (no result but set upfront)

Service redesign and revenue-based contracts in practice

The original bid that has been offered by the operator is set as minimum in order to avoid strategic behaviour during the tendering process or shirking during the contract period. The Daily Board just checks the new service offer and compares it with the original offer. This check is made taken into account the advices of the passenger advisory committee as well as the political advisory committee. If these advices are negative the Daily Board is likely to turn down the new offer. In practice a lot of new initiatives of operators can be witnessed. E.g. already three new bus lines are offered without any guaranteed subsidy of the side of the authority.

Revenue based contracts or super incentive contracts are supposed to give a big impetus to demand-driven, market-oriented behavior of operators. But what about reality? Real revenue growth figures in SRA's tendered concessions have been high. Whether this is mirrored by passenger growth remains uncertain, but probably passenger growth figures were about the same as revenue growth figures. In the table below we present the results of the past few years.

Cumulative revenue growth per concession (real) with respect to year preceeding tendering

		Realised growth			
	Offered growth	**2005**	**2006**	**2007**	**2008**
Zaanstreek (tendering 2004)	*25%*	**9,5%**	**12,5%**	**15,4%**	**8,1%**
Waterland (tendering 2005)	*35%*		**5,0%**	**11,9%**	**-1,1%**
Amstelland - Meerlanden (tendering 2007)	*50%*				**-0,6%**

This growth has come about primarily through marketing activities, promotional activities as well as autonomous action on the level of supply. Especially the Waterland operator offered several new bus lines. These were mainly specialized bus lines, e.g. a school bus to avoid overcrowding in the regular commuter line or the opening of several

new business commuter lines. All of these without any guaranteed extra subsidies. Growth would pay itself back.

Besides successes SRA also had to deal with unexpected actions caused by loopholes in the contract. During the summer, when not all the vehicles were needed for operating the timetable, several buses were deployed to a new route from Waterland to an amusement park. But, this park was near The Hague some 50 kilometres outside the concession area! Still, due to the loophole in the contract revenues made on this bus line could be listed for subsidy and so the operator did.

The sharp decrease in 2008 is reportedly caused by major strikes. Above all the global economic crisis seems to have worsened the situation. Apparently the contract did not foresee in such extreme situations. 'Traditional' net or gross cost contracts are however likely to face the same problems and it would be interesting to see how they have managed and whether the challenges are (or not) more substantial.

CONCLUDING OBSERVATIONS

All in all the use of superincentive contracts has been quite successful from the authority's point of view:

- Total costs have declined, while cost-effectiveness has increased.
- Concession management functions well, a panel of frequent users has a large influence in this process. This has shifted attention of the operator from the direct client, the government, towards the actual client, the passengers.

From the operator's point of view, the contract is perhaps not as highly successful. Despite of a more than average passenger growth compared to the Dutch average (at least in the first years) the Waterland concession seems to experience a yearly loss of several million euro's caused by the super-incentive in the contract. The loss, according to this calculation, could be about 15% of turnover. This could be the result of the operator having 'bought' the concession to increase its market share, but this is difficult to prove without further detailed analysis.

SRA also encountered some problems though:

- The transition from the incumbent operator to a new operator in the Waterland concession was not as easy as SRA had hoped for. Once, an inexperienced new driver found himself lost in a residential area. The major increase in supply and consequently large number of new inexperienced drivers and new buses, was to much to handle for the also inexperienced (in this area at least) new operator. In new contracts SRA dealt with this problem by asking for detailed implementation plans for new services as well as the employment of an implementation manager on SRA's side, who attended the implementation phase executed by the operator.
- The jump style rise in costs when deploying an extra vehicle proved to be a more practical problem: it made the operators reluctant to do so. This led to slower implementation of some (but definitely not all) improvements in supply (higher frequencies)

On a higher more abstract level SRA experienced that:

- The level of competition in the small Dutch public transport market is always a source for concern. In fact the Waterland tender only had two bidders. The third however pretended to bid as well and stiff competition was still felt by the other two.
- All public transport contracts in the Netherlands are based on the principle of authority initiative. SRA is one of the few authorities who searched for a way to mimic market initiative in this regime. SRA's superincentive contracts trigger market initiative. The fact that SRA's concessions are the only where superincentive contracts are being used, however, makes the corresponding organization needed on the operator's side largely absent. On the whole, transport operators manage their contracts cost-based and reactive towards authority initiative. One could conjecture that this makes SRA's contracts less successful than when the total Dutch public transport market had been managed the way SRA does.