

# INSTITUTIONAL AND POLITICAL CONDITIONS FOR THE ESTABLISHMENT OF CONGESTION CHARGING REGIMES: A COMPARISON OF NORWEGIAN AND SWEDISH EXPERIENCES

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## ABSTRACT

In this paper we summarize the knowledge of how toll cordons in Norway have developed the last 20 years. We compare this with the recent development in the Swedish city Stockholm, in order to further elaborate the knowledge of conditions for the establishing of congestion charging regimes in urban areas.

The initialization and spreading of toll cordons in Norway is analyzed as a result of the interplay between institutional conditions (legal institutions, procedures and the financial structure urban government is embedded in) and urban political coalitions. Several factors seems crucial for the establishing of toll cordons ; the experience of having a congestion problem; that someone takes leadership in the process; high level of trust among the actors, and the establishing of incentives, i.e, that toll cordons are likely to trigger extraordinary funding from the government or at least that the revenue will not lead to a reduction in such funding.

The content of these toll cordons/transport packages has developed over time:

- While originally revenue was solely used for road infrastructure, there is a general tendency towards increased investments in public transport.
- There is a tendency that these packages have been prolonged, enhanced to new generations, while initially set up for a 15 to 20 years period.

However; on important dimension, we can observe continuity rather than change.

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- The revenue is solely used for infrastructure, not operation.
- In most packages, there has been an emphasis on large project with strong symbolic power.
- Although addressed in the initial phase, such elements as restrictions on car use, parking policy and congestion charging, are not included in the packages when these have passed the political process.

In other words: The combination of procedural rules (local consensus) and economic incentives (local competition on scarce state budget) hinders further changes in the transport packages. The economic incentive leads to a decision making situation that induce the actors to focus on “fresh” money for infrastructure purpose. The demand for local agreement leads to a situation where every key actor necessary for such a broad agreement has a veto-position in the decision-making process. This is also an important explanation for the lack of interest and support for road pricing/congestion charging schemes in Norway.

Are these hypotheses about important obstacles for congestion charging supported when comparing these cases with the establishing of the congestion charging trial in Sweden? In general that seems to be the case: In the process leading up to the trial in Sweden, they established a situation where local government had few or no cost with the trial and at the same time the use of the revenue was earmarked for the local transport system. Their demand for local agreement was narrowed to an absolute majority, rather than requiring a considerable majority. Hence, the strategy in Stockholm was that of political conflict rather than consensus-building, a strategy that proved successful because the same coalition held majority at both national and city level. In other words: altering these conditions are among the lessons to be learnt for Norwegians or others who want to follow in the foot-steps of Stockholm when it comes to introduction of congestion charging.

## **INTRODUCTION**

Norway has a long tradition of financing of public road infrastructure through charging users through tolls – the first toll charges were introduced in 1933. Traditionally, the revenues have funded single projects, such as a bridge or a tunnel. However, with the introduction of the first European toll cordon around a city centre, in Bergen in 1986, the tide shifted. In 2004 the 4 largest cities in Norway and several smaller had introduced toll cordons, and 1/3 of the investments in public roads were financed by such tolls, most of them from urban toll cordons.

Today, there seem to be a controversy in saying and practice. The Norwegian government argues that congestion charges are a key element in order to reduce city pollution through less car usage, but so far has not created the necessary incentives in order to do so. No city has so far introduced road pricing or congestion charging. However, in the capital city Oslo, a new local initiative seems to initiate what we will call a new generation of toll cordons. This is a financing scheme introduced in order to finance road as well as public transport, yet not establishing any congestion charges. Another city (Trondheim), however, has removed its toll ring, and is not planning to introduce congestion charges.

In Stockholm the development has been different to the Norwegian experiences. Despite several initiatives over the last decades, no toll cordons nor congestion charging regimes was successfully established in Sweden. However, at the beginning of this century this shifted, and a congestions charging regime in the city of Stockholm in a trial period of one year from the summer 2005 to 2006 was established. The trial was followed by a referendum, where a

majority voted pro congestion charging within the municipality of Stockholm, but in the surrounding municipalities the majority was against it. It is likely that congestion charging will become permanent in Stockholm.

In this paper the development of urban toll cordons in Norwegian cities will be compared to the congestion charges in Stockholm, and the paper consist of two parts. First, the development of these urban toll cordons or “transport packages” (which in accordance with their increased complexity is a more precise label) in the four largest Norwegian urban areas shall be described and analysed. The following questions will be asked:

- Why was the toll cordons/transport packages introduced? Why did they spread from Bergen to all the major urban areas in Norway?
- How are their financing scheme and the use of revenue? We will refer to this question using the terminology “content of a package”
- How do the packages differ from each other, what are their similarities, and how can this be explained?

In other words, the similarities and differences of the Norwegian packages, and the fact that no congestion charging regimes have been established will be explained. Then in the second part, we include Stockholm in our analysis. We will give an overview of characteristics of the processes and outcomes in Stockholm, merely based on written sources. Does the Stockholm experiences support or falsify our hypotheses?

The paper is based on the assumption that the processes leading up to toll cordons or congestion charging may be studied in terms of the relations between social institutions, “the rules of the game”, and the social and political “play of the game.” Social institutions (norms regulating the relations between actors such as organisations, and distribution of resources, in particular economic resources), regulate the “play of the game” in transport politics. Hence, the outcome of transport politics in terms of the use of various policy instruments (such as taxation, investments and regulations) can be seen as a result of institutions as well as political processes that take place within these institutions.

In this paper we distinguish between three aspects of the institutional environment:

- Legal institutions
- Economic institutions
- Procedures

Legal institutions are norms and regulations such as law. In Norway the fact that the Road Act over decades has allowed the establishment of toll roads, in particular for bridges and tunnels as alternatives to ferries, is of outmost importance. In Stockholm, the fact that congestion charging was understood as a tax and hence to be a national responsibility, is crucial.

Economic institutions are economic structures of the incentives between the different actors. These are related to administrative structures and jurisdictions. In Norway these are characterised by the following: The State, county councils and municipalities are responsible for road infrastructure. However, the county councils and municipalities receive most of their funding from the State, as the level of local taxes is relatively low in Norway. Legally, the revenue from toll roads can only be used for investments. Financing local public transport, on the other hand, is the responsibility of the counties. Since the mid 80s this has been a part of the free transfers from the State to the counties, without any earmarking for public transport. Moreover, Norwegian transport policy has for a long time been characterised by the politics

of local representation; politicians merely represent their region/county. The national authorities (The Public Roads Administration and the Ministry of Transport) play an important role in forming these processes with strong emphasis on efficient priorities.

The characteristics in Sweden are quite similar when it comes to layers of government and financial structure. In general, however, it is argued that Swedish local authorities are less inclined to address all their fiscal problems as problems that the state should solve, than their Norwegian counterparts, as the local tax base is somewhat larger than in Norway (Baldersheim and Ståhlberg, 1998.136).

The procedural aspect is about the procedures for the decision-making process. The two main issues in Norway are, first, the requirement of local initiative and consensus for introducing tolls, and secondly, the fact that proposals for new toll roads or substantial changes to existing toll schemes must pass Parliament as a separate bill. Differently, the local consensus in Sweden was understood as an absolute local majority and the fact that the congestion charging was understood as a tax, implied that a law on taxation had to be decided on in the government and parliament.

In the following, the development of Norwegian toll rings will be analysed as a result of this interplay between social institutions and social actors acting within these institutions, sometimes limited by them, sometimes altering these very institutions and hence the scope of actions they could choose between.

### **The formative moment – evolution from toll roads on bridges to urban toll cordons in Norway**

The formative moment of the current scheme of urban toll cordons in Norway was the establishing of the toll ring in Bergen. It was a formative moment in Rothsteins (1994) meaning of the concept, as a period when new political institutions was created and the rule of the game of urban transport politics changed. This gave certain organisations an advantage in the future game of power and urban transport politics.

The background was the major congestion problems in the larger cities from the mid 70s, in particular in Oslo, but also in Bergen. At the same time, the Keynesian counter-cyclical macroeconomic policy from the mid 70s was abolished and stronger emphasis was put on reducing the growth of public expenditure. This limited the public funds for investments at the same time as the traffic increased. Moreover, Norway with a small population of about 4 million inhabitants and sparsely populated on 324 000 square kilometres, has a great demand for public infrastructure. The political system has traditionally had a strong rural and regional representation. Thus, there was little potential for increased public funds for investments in the urban areas with increasing problems of congestion.

In this context, an initiative was taken by the regional Public Roads Administration in Bergen. They formulated the problem as follows: “We have the plan for building a suitable road system around the city. We lack the necessary funds, but we also have a plan for how to get the funding – a toll ring.” The Public Roads Administration in Bergen presented their solution on an informal meeting with the leaders of the three most significant parties in the Bergen City Council; the Labour Party, the Conservative Party, and the Christian Democratic Party. Labour and the conservatives tend to oppose each other in urban policies. However, at this meeting they agreed, and a basis for consensus in local transport policy was given. The meeting was informal, but initiated an offensive information and mobilisation campaign from the Public Road Administration.

The campaign was successful, not only to the public, but also to the national government. The result was the toll ring. Several elements were important for this success: the local congestion problems, the leadership of the public road department (Langmyhr, 1997), the high level of trust in the relation between the bureaucrats at the road administration and the local politicians, and not at least Bergen is the capital of a region with a long tradition and experience of user charges of bridges and tunnels (Bekken and Osland, 2004).

However, the establishing of the toll cordon had consequences far beyond its effect on road investments in this particular city area. It changed the “rule of the game” and opened up for new ways of how urban transport infrastructure was funded. The Bergen toll cordon was backed by a promise of extraordinary public funds. There was an informal agreement between the State and the local level which expressed that the State would grant the same amount of money to infrastructure investments as the expected revenue of the toll cordon. This notion of extraordinary public funds created a “model” for other urban areas.

Since the Bergen toll cordon such schemes have been introduced in several urban areas. The second was the Oslo toll cordon. The two largest cities had now introduced the scheme, and the third largest, Trondheim, followed. By 1992 the largest Norwegian urban areas had introduced such schemes.

### **The Norwegian urban toll-cordons 1986-2007**

In this part we shall give an overview of the development of the toll cordons. First, how the content of toll cordons has changed during the last decades shall be described.

#### ***Contents of the packages in 2004 – the contributors are also the beneficiaries directly or indirectly***

When describing the contents of the packages, we will focus on two issues. First, we look at how the tolls are collected (the financing scheme). Second, we look at how the funds are spent. To some extent these are linked to each other. The established principle for Norwegian toll roads was that the revenues should benefit the contributors. The first toll cordons followed this principle by deciding that the revenues should fund roads as the contributors were road users. However, for some of the packages this is no longer the case. Increasingly revenues are used in public transport investments. This is based on the following principle regarding Norwegian road funds: When alternative uses of the funds provide a better solution to the overall transportation, the funds can be used for such purposes. This, however, only applies to investments in infrastructure – not operation of, for example, public transport.

#### ***Financing scheme***

The financing scheme of the urban toll cordons in Norway differs regarding several aspects. Table 1 in the appendix provides a brief overview of the different financing schemes as the situation was in 2004. The table shows that the average fare level in Oslo is almost three times the fare level in the Nord-Jæren area, whereas Oslo at the same time has the lowest maximum yearly payload of all the areas.<sup>2</sup> This is the result of Oslo having an annual pass, whereas in Nord-Jæren motorist must pay for up to 75 trips per month. Thus, when considering Oslo as a road pricing scheme some adverse effects are present. The daily users pay the least, whereas infrequent users pay the most, with no regard to the time of the day. This is further enhanced by the recent fare hike in Oslo, which only applied to the single fare, not to pass holders.

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<sup>2</sup> This is calculated from the fare during rush hours with the available discounts and the maximum number of trips to pay for per month.

The Trondheim toll cordon has highest maximum payload. This scheme is similar to road pricing in the sense that it has some fare differentiations. The reason is the emphasis on fareness. A zonal system affect more road users, i.e. more have to pay, and fare differentiations have been introduced.

### *Use of revenue*

The type of projects, their size and to what degree they are earmarked for certain purposes or geographical areas are important aspects. There has been a clear change towards more investments in public transport infrastructure. As already mentioned, the revenue from the first toll cordon in Bergen (est. 1986) was solely used for investment in road construction. The second generation of packages (Oslo package 1, 1989 and the Trondheim package (1991) had earmarked shares of 10-20% for public transport investments. The newer packages, what we have here labelled the third generation (Oslo package 2, 2001, the Nord-Jæren package 2001 and the Bergen programme, 2003), all have a heavy emphasis on public transport, with investment shares between 50 ad 100% for public transport. In the following, this development shall be described more thoroughly.

#### The Oslo packages

The toll cordon in Oslo was first intended as an ordinary toll road, financing the tunnels below the city centre, relieving the downtown through traffic. However, before it was established, the municipality of Oslo joined forces with Akershus County and opted for a package to finance several other projects as well. One of the reasons was the lack of sufficient public funds. In the first package, Oslopakke 1, there was a fixed share of 20% earmarked for public transport investments. In 2001, the new package, Oslopakke 2 (O2), passed Parliament. O2 is an addition to the current Oslopakke 1 and consist of an increase in the fare of the toll cordon of 0,25€per trip and an increase in the public transport fare ticket of 0,1€per trip. All the revenue accruing from the new package is earmarked for public transport investments.

#### The Bergen toll cordon (1986-2002) and the Bergen programme (2003-

The Bergen toll cordon was the first of its kind in Europe. The goal was to speed up a solution to the traffic problems in Bergen. Thus, the focus was on road investments. The new Bergen programme is based on a political compromise between the public transport supporters and the road supporters. The revenue is split between road and public transport infrastructure. The public transport share is planned to finance the development of tram in Bergen.

#### Trondheim toll cordon (1991-2005)

In line with the other early packages, the Trondheim toll cordon was a road investment package. However, a fixed share of 20% was earmarked for public transport, safety or environmental investments related to the traffic.

#### Nord-Jæren package (2001-

This package is of the new generation including both public transportation (PT) investments as well as road investments. The PT part is primarily related to local rail investments.

### **Summary – the content of the packages in 2004**

The development of toll cordons may be characterised as follows:

- There is a general tendency towards increased investments in public transport.
- There is a tendency that these packages have been prolonged, enhanced to new generations, while initially set up for a 15 to 20 years period.
- There is a weak tendency towards elements of congestion charging.

On important dimensions continuity, rather than change, can be observed:

- The revenue is solely used for infrastructure, not operation.
- In most packages large projects with strong symbolic power have been emphasized.
- Although discussed in the initial phase elements such as restrictions on car use, parking policy etc are not included in the packages decided on by politicians.

The following table summarizes the content of the packages.

	Bergen toll cordon	Oslo package 1	Trondheim toll cordon	Oslo package 2	Nord-Jæren package	Bergen programme
Share road vs public transport	Road package	Road package (20% for PT)	Road package (20% for PT and env.)	Public transport package	Public transport package (65%)	Combined package (50/50)
Regional earmarking	No	Yes (60/40 Oslo/Akershus)	No	Unspecified	Yes	No
Fare level (relatively)	Medium	High	Medium	High	Low	Medium
Elements of congestion charging	No	No	Weak	No	Weak	No

Source: Bekken and Osland (2004)

**Table 2: Summary of the contents of the packages**

The similarities and differences can be understood in terms of the economic, legal and procedural institutions. On one hand, their relations to and interplay with local processes and coalition on the other hand.

### **The Institutional Framework and Local Processes Creating The Packages**

As mentioned, the legal framework for the toll cordons was established with the toll cordon in Bergen. However, the legal framework has changed on several occasions. In the early 1990s the possibility to impose differentiated fares at different times were introduced in the Road Act, yet on the condition that the differentiation would not negatively influence revenue. Although this change, as well as the possibility to use road investments alternatively for public transport purposes has increased the packages' flexibility, the major legislative change had to wait until 2001. In 2001 road pricing was accepted in the Road Transport Act. Thus, it is theoretically possible to introduce road pricing. However, the initiative must be local.

The local processes leading up to the packages take place within the framework as depicted. The legal aspect defines some approaches as legal and others as illegal. The procedural and economic aspects make certain alternatives more viable than others. Nevertheless, the

outcome depends on the different constellations of actors involved in the local decision-making process and the compromises established.

### ***The Bergen political compromise***

Two characteristics of the Bergen Programme are crucial: (a) the inclusion of the city tram, and (b) the reasons as to why the existing financing scheme is maintained although more advanced schemes more similar to road pricing have been suggested.

The first toll cordon in Bergen in 1986 was initiated locally by the Public Roads Administration. In 2003, the toll cordon was prolonged through the Bergen Programme. This new package includes a large public transport infrastructure investment: a new city tram (“Bybanen”).

The main supporters of the city tram were politicians representing the centre and left wing parties. They managed to add the tram to the planned road investments, and hence make a compromise with the Conservative Party. The compromise was based on the combination of road investments and a large public transport investment. However, the proposal met resistance from the Public Roads Administration locally as well as nationally. They have been critical to the alternative use of road funds, questioning whether the city tram is a good alternative to road investments.

This disagreement is a distinctive feature of the Bergen Programme compared to the other cities. However, government and parliament decided that the local political compromise should have heavier weight than the scepticism from public administration, and the Bergen programme was decided to function from 2003.

More advanced schemes more similar to road pricing have been suggested, the most discussed and evaluated alternative was a system of two rings and differentiated fares. However, the existing financing scheme was maintained. The main reason is that one of the major parties in the coalition opposes, of ideological reasons, road pricing and anything similar to it. However, also other parties may fear loss of votes if such an alternative was chosen, not the least because of fierce opposition from the right –wing Progressive Party.

The expected negative response by the voters also influenced the decision. The city tram was a way of mobilising voters; road pricing as, however, not popular. Hence, the newly established Bergen programme contains no rush our differentiated fares.

### ***The Oslo packages – a result of professional-administrative cooperation***

In Oslo there was no single initiator as in Bergen. Sørli (2000) has documented how the process behind Oslo package 1 involved many actors (the two county councils Oslo and Akershus as well as various levels of the State administration). This explains the greater complexity as well as fragility in comparison to the process in Bergen. Interests in this package covered a wide area politically as well as professionally and geographically. The actors agreed on an earmarked use of the revenue within the different counties (60% in Oslo, 40% in Akershus).

Oslo package 2 is a “pure” public transport infrastructure package. It was initiated by the National Railway Company (Lerstang and Stenstadvold, 2003). The project was supported several actors who wanted to improve the region’s public transport. In contrast to the situation in Bergen, the actors agreed that a good public transportation system is essential for the



overall transportation in the region, and a professional-administrative network cross-cutting different organisations have been established, assuring that most priorities and controversies are solved internally.

Of interest is the fact that restrictions on car usage were recommended, in order to make the investments in public transport more efficient in social economic terms. Yet, such restrictions have not been included in Oslo package 2. The situation is similar to the one in Bergen. The need for local compromise gives certain actors a veto position. As a result there is an incentive structure which probably results in an over-investment, as each actor (organization) will focus on projects with strong symbolic effect and as small political costs as possible. With a veto for all actors making each able to jeopardize the notion of local agreement, we can expect that the package will only be accepted if all actors have some symbolic projects included.

### ***The Trondheim package – a result of competition over scarce resources***

Locally, the process behind the Trondheim package is characterized by a competitive situation with the other large cities. The competition was for the scarce funds allocated to road infrastructure at the national level. There was a local understanding that introducing user fees was a way to “buy a better place in the line” waiting for public funding. This was a result of the fact that in Bergen as well as in Oslo, the introduction of toll cordons triggered extraordinary public funding. Trondheim would, in other words, be in a competitive disadvantage in receiving public funding if the region did not introduce a toll cordon.

As in Bergen, the local Public Roads Administration together with important politicians initiated the process. With a focus on environmental issues in the late 80s, 20% of the funds were earmarked for such issues including public transport and safety. Different to Bergen, the politicians in Trondheim seem to show much interest in the toll collecting scheme from the beginning. This may explain why the system was revised to a more advanced one with elements of congestion charging. Langmyhr (2001) argues that this also was a result of local professional interest in the field.

### ***Nord-Jæren – support based on a broad scope of revenue use and low fares***

The toll cordon in Nord-Jæren came more than 10 years later than the other packages. As in Bergen and Trondheim, the initiator in the 1980s was the Public Roads Administration with support from the county council (Langmyhr, 1997). The first initiatives did not succeed, partly due to the competition between the two large cities in the area, Stavanger and Sandnes, and their opposition. However, in the early 90s processes of developing a coherent land use policy in the region (Lerstang og Stenstadvold, 2001), and larger investments in rail infrastructure weakened the opposition, and a broader political consensus was achieved.

The toll cordon covers a very large geographical area. The fares introduced were low, with some differentiations making the fare in the rush hours somewhat higher. Due to unexpected low revenue, the fares increased and in 2004 the differentiation was abolished. A large amount of the package is earmarked for railroad investments.

To sum up, the situation changed when Stavanger accepted the proposed scheme. Although Sandnes was still in opposition, the Parliament did not turn the proposition down arguing that the other municipalities affected by the cordon were positive.

## Summary and concluding remarks the 1986-2004 period

The development of the packages in terms of their content is characterised by both continuity and change. The continuity can be summarized as:

- Large scale projects in which actors have ownership
- Revenue solely used for infrastructure purpose
- Few or no measures that represents any strong political or economic costs for the involved actors, such as restrictions on car use or other measures that could reduce further need for investments

These similarities refer to certain institutional characteristics:

- The legal framework has not allowed the revenue to be used for other purposes than infrastructure investments until the opening for road pricing in 2001.
- The combination of procedural rules (local consensus) and economic incentives (local competition on scarce state budget) result in a decision making process that induce the actors to focus on “fresh” money for infrastructure purpose, using toll revenue rather than financing operation over their own budgets. This also explains the reason for the lack of interest in road pricing schemes.

The variation between packages is mostly related to changes over time and an increased emphasis on public transport.

- The second generation of packages (late 80s and early 90s) included earmarked revenue on 20 % for environmental purposes and public transport
- The third generation of packages (from the end of 90s) included large scale investments in public transport.

These changes over time are related to the increased public and political focus on environmental issues in Norway (as well as in the rest of Europe) in the late 1980s (Jansen, Osland and Hanf, 1998). In transport policy this interest was understood as an argument for increased use of public transport. Moreover, in the third generation packages actors representing public transport interests enter “the field of package politics”, using the established toll cordons as a point of departure for a new era of investments in public transport (Bekken and Osland, 2004).

Moreover, geographical variation between the packages exists, in particular different fare levels and purposes of revenue. The variation reflects the planned investment levels related to challenges in the transport system. Also various local concerns on fairness is of importance. In Trondheim there is a tendency towards time differentiated fare levels which is a result of the professional and economic interest in technical solutions to urban transport problems in this city.

As to the question posed in the beginning of this paper; why has the use off toll cordons spread from city to city, some conclusions can be drawn. After the establishment of the toll cordon in Bergen a new dynamics was established; for many local actors toll cordons/transport packages has been viewed as a way of combining extraordinary funding from car-users and aiming at extraordinary funding from the state, subsidiary at least to get a commitment from the government that important investments in the local transport system will have high priority. On the other side, also representatives in government and central

administration, see the advantages of such transport packages for reducing the pressure on the transport budget, and hence leaving room for other projects.

Furthermore, the scope for the legitimacy of the packages has been expanded. The first package was legitimated as long as the revenue collected from road users funded roads. The new generations of packages, however, include public transport and environmental issues, thereby achieving support from more groups. At the same time legitimacy built on the direct link between the motorists and the benefit of the road packages erodes.

### **Post 2004 – State Initiatives and Local Resistance Against Congestion Charging**

In the current situation, the future for new packages is unclear and varies among cities. On one hand, initiatives for establishing a fourth generation can be observed. These include road pricing, increased use of revenue for other purposes than infrastructure investments, and also other elements of transport policy (e.g. parking and land use policy) in the packages. In particular, this position has for a long time been promoted by actors within public administrations such as the public road administration, lately also by the Minister of Transportation from the Centre Party and her colleagues in the “red-green” government (a coalition between the Socialist left party, the Labour party and the Centre party). On the other hand, significant actors, not the least among politicians from conservative and neo-liberal wing, strongly oppose such a development. They are of the opinion that such packages should either be abolished, or follow the traditional principle of making benefits (road construction) follow the contributors construction (road users). Moreover, they are in government in most larger Norwegian cities.

As to the situation in the different cities, this roughly is as follows: In Bergen as well as in Nord-Jæren there are packages decided upon by parliament running to the midst of the next decade. In Trondheim the local government dominated by the conservative party, decided that when the ordinary programme ended in 2005, they did not want the toll ring to continue. In Oslo, a broad local coalition covering the whole political spectre which today is represented in parliament (from the Socialist Left Party to the right wing Progressive party) has initiated the third Oslo package. New is that revenue will also fund operation of public transport, in addition to road and public transport infrastructure. However, the compromise excludes congestion charging or rush hour differentiated fares.

In other words, despite national policies and initiatives, congestion charging is not yet to be reached in Norway. What can be learned from Stockholm?

### **The Stockholm congestion scheme – lessons to be learnt**

As pointed out above, some major factors have been pointed out as explanations for the development of the innovation that toll rings actually was in Norway:

- the experience that one had a congestion problem
- that an actor or a group of actors took leadership in the process
- high level of trust in the relation between the key actors among politicians as well as in relation to the public administration
- the establishing of a positive sum-game, where local government felt assured that revenues from toll rings either would lead to increased additional state spending or at least not to a reduction in such spending

This latter point has “another side of the coin” when it comes to the question of why congestion charging or rush differentiated charges have not been introduced:

- The combination of procedural rules (local consensus) and economic incentives (local competition on scarce state budget) leads to a decision making situation that induce the actors to focus on “fresh” money for infrastructure purpose, using toll revenue rather than financing operation over their own budgets. This also explains the reason for the lack of interest in road pricing schemes, there are considerable political costs and few or no economic incentives for introducing them.

How does the case of Stockholm fit in to these explanations? Does it support them or does it falsify the hypotheses? Do our hypotheses need to be nuanced?

The story of the Stockholm congestion scheme is not finished. So far a congestion charge was established for a trial period from 3 January to 31 July 2006. The objectives of the trial were to reduce congestions, increase accessibility and improve the environment. Generally speaking, the trial in Stockholm included not only the congestion tax, but also extended public transport and more park and ride facilities in the Stockholm county. In this broader sense, the trial began in August 2005, with the extended public transport. The trial programme was successful in terms of meeting the objectives, in particular reduced congestion.

Before the trial period a majority of the population both within and outside the Stockholm municipality was against congestion charges, whereas in a referendum held in the Stockholm municipality in conjunction with the Swedish general elections in September 2006, 51.3 % voted for the congestion charges to be permanent (Gudmundsson et al, 2006). In the surrounding 14 municipalities the referendum resulted in a majority against a permanent charge. The referendum is only consultative. The coalition that supported, initiated and established the congestion charging – the coalition between social democrats, the green party and the left party – lost the election. The parties that most strongly had been against such a charge, a centre-right coalition, won that election. However, the new government respected the referendum and gave the Swedish Road Administration the mandate to prepare the reintroduction of the charges in August 2007. However, the reintroduction implies several changes. One of them, and perhaps the most important change, is the decision that revenue shall fund road investments (op.cit. p 17).

In this paper we limit ourselves to discussing the characteristics of and the background for the congestion charges established as a trial scheme in the period from July 2005 to June 2006. This is in itself a complex and intriguing story, involving actions and decisions at different levels, and also a decision making process characterised by high speed and strong pressure. For instance, there has been several legal disputes. The political opposition claimed that the trial in itself lacked legal basis and put this claim forward to court; the company that did not win the contract for the technical system appealed against the decision in court, the latter adding to the explanation of why the trial only lasted 7 months.

We shall not, and will not attempt to give an overview of this process (for detailed overviews see the four detailed reports (“lägesrapporter”) (Ehrling, 2004, 2005a, 2005b and 2006). Nor will we attempt to locate or analyse all important actors and factors driving the process, e.g. we will not discuss what seems to have been the important role of expertise in both conducting research and evaluations as well as informing mass media and the public. Such analyses has been started by other scholars (see e.g. Gudmundsson et al, 2007 and Isaksson and Richardson 2007), and is likely to be of high importance for understanding the relative success of the trial programme both in terms of meeting the objectives as well as achieving

public support for the trial, and hence the probability that the congestion charge will become permanent.

What we will do is to try to test out and nuance our hypotheses concerning the barriers for establishing such congestion charging schemes in Norway. Does the Stockholm story support our previous analyses? Two methodological aspects should be noted. First, it may be argued that this analysis does not take into account the fact that the Stockholm case is a trial and a referendum was carried out. Hence, the Swedish observation may have other characteristics than our Norwegian cases. Second, our analyses are based on written sources, primarily the reports from Ehrling referred to earlier. The conclusions we draw should be considered preliminary, merely as a first test of the hypotheses outlined above.

We start by outlining the elements that seem to be key characteristics of the scheme:

- The motivation of introducing the toll cordon in Stockholm was not funding infrastructure as in Norway, but to reduce congestion. The primary goal was to reduce congestion; revenue was a positive side effect
- The establishing of the scheme had significant costs. In addition to administrative and technical costs due to the system, a crucial part of the costs were connected to investments in public transport (e.g. buses) to meet the increased demand for public transport and investments in park and ride facilities. From the very beginning the local government argued that the cost should be covered by the national government (Ehrling:2004, p 11), and this was accepted in the governmental bill in April 2004 (Ehrling 2005a, p 12)
- The state also received the income. According to Swedish law, congestion charges were defined as a tax, hence, a state responsibility. The Ministry of Finance was responsible for the budgetary process. Early in the process the local government argued that the revenue should be earmarked transport purposes in the Stockholm-region (see point 2 above). This was accepted.

How does the Swedish case fit into our earlier interpretations and hence the hypotheses formulated above?

First, we have argued that in Norway, local authorities had no incentives to establish such a scheme, as it would not imply increased income nor reduced costs. In the Stockholm, however, the state paid all the expenses. There were no negative economic effects in terms of increased costs for local governments. Actually, seen from the local government the economic effect was positive as the revenue went to local public transport. There were no expenses for the local government. The state and the car drivers paid the bill.

Second, we argued that the demand for local consensus represents an obstacle in the Norwegian cases. This hypothesis is also supported. Originally, in September 2001, the Swedish government uttered that congestion charges, being a tax that had to be decided on in the parliament, should have a considerable majority. In March 2003, however, the committee of transport in the parliament argued that “municipalities or regions are the ones to decide whether congestions charging should be introduced or not. There is no demand for a ‘considerable’ majority.” In other words, what happened in Stockholm during the process was that the demand for local agreement was specified to an absolute majority. Hence, it was not considered necessary to establish a majority that would be broader than shifting local governments. Indeed, what actually happened in every crucial decision making process in the municipality, was that a narrow majority (e.g. 51-49 in the initial vote in June 2003) of the local and central governmental coalitions launched the decision through, facing fierce

opposition from the centre-right parties (Ehrling, 2004, p 9). Different to the Norwegian cases in which the support for large packages is based on broad political support, overcoming both the left-right and the green cleavage in transport policy, congestion charging has been a highly politicised area in Sweden.

In other words, our hypotheses are supported by the Swedish experiences. However, an additional condition seems crucial in Sweden. During the decision period prior to the trial they have had the same majority in the municipality of Stockholm as well as in Parliament. This may have been a necessary condition for what seems to be a highly coordinated process at many governmental levels, and performing under severe time pressure. The formal initiative was taken by the Green Party. After the election, the party was in a key position at the national as well as the local level, and demanded a congestion charging trial in Stockholm in return for supporting the social democratic minority government. The Mayor candidate for the Social Democrats in Stockholm, Annika Billström, was ambiguous towards congestion charging. For several years she had argued for such charging, yet under strong pressure from the Moderate party and their electoral campaign to “stop the social democratic road tolls” she said that such taxes would not be introduced during the coming term. However, facing pressure from the national level, the local social democrats received an offer they could not refuse: either they had to accept a congestion charging trial or the national social democratic government would be overturned (Isaksson and Richardson, 2007).

This is a story, and an analysis of itself. It shows the importance of national level’s initiative in establishing congestion charging. It also shows the significance of coordinated actions by similar political regimes at national and city level at the time of the decision taking. Further analyses need to be done in this area, especially of the actors that have represented crucial leadership during these years. As for now, it also seems that the factors we have presented and discussed here, also seems to be crucial for the establishing of a congestion charging regime in countries with similar governmental structure with that of Sweden.

## **ACKNOWLEDGEMENTS**

The first part of this paper is based on an earlier paper on the development of toll rings in Norway (Bekken and Osland, 2005) funded by the Norwegian Ministry of Transport and Communications. As to the information from Stockholm, Jan Usterrud Hansen and Olve Osland have gathered and provided useful and necessary information.

## **REFERENCES**

- Bekken J-T and O Osland (2004) *An offer you can’t refuse – innføring av bomringer I norske byområder*. TØI-rapport 733/2004. Oslo: Transportøkonomisk Institutt.
- Bekken J-T and O Osland (2005) *An offer you can’t refuse – On the establishment and development of Norwegian Toll Cordons*. Paper presented at the PIARC Seminar on Road Pricing with emphasis on Financing, Regulation and Equity.
- Ehrling, G (2004) *Trängselsavgifter i Stockholm – Lägesrapport 1. Regionplane- och Trafikkontoret*. PM 1: 2004
- Ehrling, G (2005a) *Trängselsavgifter i Stockholm – Lägesrapport 2. Regionplane- och Trafikkontoret*. PM 1: 2005
- Ehrling, G (2005b) *Trängselsavgifter– Lägesrapport 3. Regionplane- och Trafikkontoret*. PM 10: 2005

- Ehrling, G (2005b) *Trängselsavgifter i Stockholm– Lägesrapport 4. Regionplane- och Trafikkontoret*. PM 5: 2006
- Gudmundsson, Henrik, Muriel Beser Hugesson, Eva Ericsson, Lena Smidfelt Rosquist (2007). *The role of decision support in the implementation process of the Stockholm congestion charges*. Paper presented at the Scientific conference in Stockholm, may 29.2007. What do we learn from the Stockholm Congestion Charging Trial? Conclusions regarding effects, policy and acceptance
- Isaksson, K and T Richardson (2007). “*Building legitimacy for risky politics: managing deliberation on the frontline*”. Paper presented at the Scientific conference in Stockholm, may 29.2007. What do we learn from the Stockholm Congestion Charging Trial? Conclusions regarding effects, policy and acceptance
- Jansen A-I, O Osland and K Hanf (1998) *Environmental challenges and institutional changes. An interpretation of the development of environmental policy in Western Europe*. In: Governance and Environment in Western Europe, edited by Hanf H and A-I Jansen. Longman, 1998.
- Langmyhr T (1997) *Vegprising som planleggingsutfordring*. Dr. Ing avhandling 1997:121. Institutt for samferdselsteknikk. IST-rapport 1997:6, NTNU, Trondheim.
- Langmyhr T (2001) *The rationality of transport investment packages*. Transportation 28: 157-178, 2001.
- Lerstang T and M Stenstadvold (2001) *Det umuliges kunst? Bruk av fylkesdelplaner for å oppnå mer helhet og samordning av samferdselspolitikk på regionalt nivå*. TØI-rapport 531/2001. Oslo: Transportøkonomisk institutt.
- Lerstang, T and M Stenstadvold (2003) *Oslo-pakke 2 – en helhetlig pakke eller en pakke i helheten?* TØI rapport 664/2003. Oslo: Transportøkonomisk institutt.
- Rothstein B(1994) *Labour-market institutions and working-class strength*. In: Structural politics, edited by Steinmo S, K Thelen and F Longstreth. Cambridge University Press, 1994.
- Sørli I (2000) *Bomringen i Oslo - bakgrunn, beslutningsprosess, implementering*. Oslo kommune, byrådsavdeling for miljø- og samferdsel.

## APPENDIX

**Table 1: Comparison of the financing scheme of Norwegian urban toll cordon packages.  
Source: Bekken and Osland (2004)**

		Greater Oslo	Bergen area	Trondheim area	Nord-Jæren area	Norway – all toll roads
Single fare rush hour private car, EURO	Pr 31.12.2002	1,8	1,2			
	Pr 01.11.2004	2,4	1,8	1,8	1,2	
Reduced fare outside rush hours		No	No	Yes	Yes	
Trips through the toll cordon in 2002 (mill.)		89	20	20,5	20,4	228
Revenue in 2002, EURO (mill)		127,6	19,1	20,5	9,9	389,3
Average fare per trip, EURO	2002	1,4	0,9	1	0,5	1,7
	2003	1,5	1			N/A
Maximum yearly payload per private car in 2002, EURO (maximum trips per month to pay for)		500 (yearly pass)	550 ( 50 )	780 ( 60 )	550 ( 75 )	