Congestion Taxes in City Traffic
Lessons learnt from the Stockholm Trial

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As car ownership has become increasingly universal, so have problems with air pollution, congestion and traffic noise, all becoming worse in urban areas all over the world. It has long been known that one way of countering these kinds of negative aspects is to levy a charge on vehicles travelling within a certain area. Systems for environmental or congestion charging have been discussed for many years in a lot of towns and cities, but turned out to be difficult to implement – not least because of strong resistance from citizens, trade organisations, vested interests, and similar parties. Apart from the political challenges, there can also be institutional and legal complications, depending on which town or country is concerned. For many years Singapore was the only city in the world with a charging system dedicated to reducing congestion. That situation has changed recently. Congestion charging was introduced in central London at the beginning of 2003, and in the first half of 2006 a congestion tax was tried out in Stockholm – eventually leading to a permanent system of congestion taxation since 1 August 2007. At the present time the question of congestion charges has become an item high on the agenda in several cities all over the world.

From 3 January 2006 until 31 July of the same year, a congestion tax was tried out in the city of Stockholm. It was part of the so-called Stockholm Trial, which also involved expanded public transport and aimed at reducing traffic and congestion, cutting journey times and improving the environment. In a nutshell, the congestion tax trial meant that motor vehicles passing through one of the 18 charging stations on roads leading into and out of the inner city were required to pay a tax for the privilege. Exempted from the charge were emergency vehicles, foreign-registered vehicles, diplomatic vehicles, military vehicles, buses with a total weight of at least 14 tons (on application), so-called ‘environmentally-friendly cars’ (cars that can be permanently
or temporarily driven by electricity, alcohol or gas other than LPG), taxis, mobility service vehicles with a total weight of less than 14 tons (on application), and motorcycles and cars driven by the disabled (on application). The amount paid was between 10 and 20 kronor, depending on the time of day the charging station was passed. Journeys were charged every weekday during the trial period between 06.30 and 18.28. The maximum daily payment per vehicle was 60 kronor.

Vehicles passing Stockholm on Essingeleden, the only trunk road connection between the southern and northern part of the city region, did not need to pay any congestion tax. A special exemption from payment was Lidingö – a municipality bordering on the city of Stockholm whose only connection with the national road network is via the inner city. The ‘Lidingö Rule’ meant that any vehicle that passed the charging station on Lidingö bridge and one other charging station within thirty minutes did not need to pay congestion tax.

The congestion tax trial lasted for just under 7 months, which meant 139 tax-days. During the period of charging a total of about 47 million vehicles passed through the charging zone, of which 37 million were required to pay the tax. A total of about 15 million charges were levied, generating an income of around 398 million kronor.

The question of congestion charging and other kinds of road charges has been discussed in Stockholm for many decades, and on a number of occasions a decision has been made to introduce the measure. But it has never before been implemented. How did it come to be that on this occasion the decision could in fact be implemented? What were the political bones of contention, and how were they handled? How was the trial designed? What did the citizens of Stockholm think about it and how did it affect the travelling habits of people travelling through the city?

In this book the Stockholm Trial is described and analysed from three perspectives: the political-administrative process, predicted and actual effects of the tax, and how the trial was experienced by the citizens of Stockholm. Anders Gullberg’s and Karolina Isaksson’s paper, ‘Fabulous Success or Insidious Fiasco. Congestion Tax and the Stockholm Traffic Dilemma’, is an analysis of the political and administrative course of events leading up to the implementation of the trial. It focuses on the period from the election of 2002 to the realisation of the trial in January 2006. An historical flashback explores how the question of road charging was discussed in Stockholm from the early 1970s on-
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wards. Gullberg’s and Isaksson’s contribution is based, among other things, on interviews with politicians and administrators, who played key roles in the implementation of the trial. The paper aims to map and analyse the course of events, and above all to answer the question of how this trial, with all the difficulties and developments it entailed, was implemented. Special attention is paid to urban traffic as a social dilemma. The chapter concludes with a reflection on who emerged from the congestion tax experiment as winners.

Jonas Eliasson’s paper, ‘Expected and unexpected in the Stockholm Trial – the Views of a Transport Researcher’, is an account from inside the network of experts who were commissioned to implement the Stockholm Trial. In the spring of 2003 Eliasson was working for Transek, the consultancy firm engaged to draw up the first proposed design of the congestion charging system. Later, Eliasson became chairman of the scientific analysis group managing the comprehensive evaluation of the trial. Eliasson’s contribution describes a series of concrete aspects of the design of the charging system – such as the placing of the charging zone borders, the choice of technical equipment and the level of payments, etc. – and also important choices regarding the way forward, uncertain factors and surprising developments in the process. Eliasson presents a series of lessons learnt from the Stockholm Trial, both general and specific to transport-economic considerations.

The concluding paper in the book is written by Greger Henriksson. In the chapter ‘What did the trial mean for Stockholmers?’, he analyses the Stockholm Trial from an everyday point of view – how it was experienced by a selection of inhabitants of the city and the region. Henriksson’s analysis is based on qualitative interviews and travel diaries kept by residents of the city and the county. Among other things, it focuses on the multiplicity of often complex and paradoxical feelings, interpretations, and other attitudes and reactions that the trial gave rise to. The paper also discusses how the trial caused a number of individuals to change their minds about it, and altered the climate of the debate. This has resulted in a broader acceptance of the range of possible solutions to the problems caused by Stockholm traffic, not just among politicians but also among ordinary citizens.

With hindsight, the Stockholm Trial has been called a successful example of how ‘mobility management’ can be used to bring about significant decreases in congestion and travel-time problems in big cities. Chronologically it came three years after the introduction of the
well-known congestion charging system in London, and both systems are positive models that could boost the implementation of similar systems elsewhere in the world. The Stockholm Trial fulfilled and even surpassed the expectations of transport economists. Obviously, the effect varied considerably on different roads in the city and the region; but overall, the trial had a significant effect and reduced congestion to an extent that was not only measurable, but was so big that it could be seen with the naked eye.

A referendum was held in September 2006 in which the inhabitants of the city of Stockholm voted narrowly in favour of congestion tax. Since 1 August 2007, congestion tax has been a permanent feature of Stockholm traffic. The current system differs in several ways from that used during the trial. Instead of using the income mainly for improvements in public transport, which was the stated policy during the trial, the revenues are now used for future investments in new roads in the Stockholm region – such as the long-planned and highly controversial “Stockholm bypass”. Other changes are that the charge is now tax-deductible, and that fines for failing to pay have been significantly reduced.

Looking back, the Stockholm Trial has often been presented as a success. However, the aim of this book is not to write a heroic saga praising the implementation of the Stockholm Trial, but to make a contribution to a critical examination of and reflection on the trial and its aftermath. The course of events illustrates in many ways how this kind of traffic policy can be used for very different purposes, depending on what vested interests and perspectives are given preference in the design of the specific system. The question of urban mobility – whose mobility and journey times and which kind of transport should be given priority at the expense of whom? – is just as riddled with conflicting opinions as it was before. A fundamental question is still unanswered: is the aim of congestion tax primarily to generate income in order to build an infrastructure to accommodate the increased use of motor vehicles, or is this kind of system a means of bringing about a comprehensive change in urban mobility, now and in the future?

The project has been financed by the former Congestion Charge Secretariat in Stockholm, the municipal authority responsible for implementing the trial.
Anders Gullberg & Karolina Isaksson*

Fabulous Success or Insidious Fiasco

Congestion tax and the Stockholm traffic dilemma

A full-scale trial over several years with congestion charging is to be carried out in the inner city of Stockholm.

That is what it said in the agreement, dated 1 October 2002 at 8.40 p.m., between the Social Democrats, the Left Party and the Green Party at the national level regarding how Sweden should be governed during the forthcoming four-year term of office. On 3 January 2006, three years and three months later, a trial began with the imposition of congestion tax in Stockholm’s inner city, this being part of the Stockholm Trial, which also involved investment in public transport. At the end of July that same year, after barely seven months, charging ceased. The total cost came to 3.8 billion kronor, and the amount of tax paid was 0.5 billion kronor. So what was first called a charge had been transformed into a tax, and the trial had lasted nowhere near several years; but it had taken place full-scale, and in the place originally designated, i.e. Stockholm’s inner city. On 1 August 2007, after another year which included a referendum on 17 September 2006, congestion tax was reintroduced on a permanent basis, but in a slightly different form.

What happened is sensational in many ways. Suggestions have often been made since the 1970s for various types of charges to improve the flow of traffic in Stockholm. On some occasions agreement has even

* Many thanks to the people who consented to be interviewed, and especially to those who scrutinised and commented on earlier drafts, and to Gabriel Romanus who also made valuable suggestions for improving our manuscript.
been reached and decisions made; but all previous attempts have been killed off by extremely strong resistance, and to some extent legal complications. Political parties involved have not managed to stick to their agreements, either internally or between local and national power centres. Election tactics have tempted parties to abandon the idea of charging and portray their opponents as being in favour of it. It has always been possible to persuade motorists and motoring organisations to mount strong opposition to charging. It is surprising, to say the least, that this time it was possible to set up and carry out the trial, considering the extremely strong opposition, the filibustering tactics of those averse to charging, the confusing way in which the matter was handled in the first year, and the long drawn-out legal proceedings that followed it. The flames of opposition were fanned by continual references to the manifesto pledge made by the incoming mayor of Stockholm, Annika Billström, during the election campaign in the autumn of 2002. Only three weeks before election day, she had made the following statement on Swedish Television’s regional news programme ABC:

My message to the voters of Stockholm is that there will be no road charging during our next term of office, and that is a manifesto pledge on our part.  

In several respects, the way in which road charging was introduced went against the findings of research done into the possibility of such a move being accepted. Nevertheless, the referendum was won by those voting in favour of charging: the ayes registered 51.3 per cent of the votes and the nays 45.5 per cent, despite opinion polls before the start of the trial giving the ayes no chance at all. It was a clear majority, but put into question by the fact that the nays had a majority in referendums conducted in several suburban municipalities. If the whole of the Greater Stockholm region had been allowed to vote, the objectors would probably have won. Nevertheless, given the way in which the trial took place, the victory by the ayes was most remarkable.

Even with regard to what is known about how large-scale projects and the implementation of political decisions are promoted, it is sensational that the trial could take place. The decision had not been prepared for at national level. It had been made hastily in the closing stages of negotiations to prevent the Social Democratic government – led by Göran Persson – from losing a vote of confidence in Parliament. In the
hard-pressed circumstances there was no possibility of working out a
detailed framework for the trial, despite the fact that negotiations see-
med to have been far advanced in the Stockholm Town Hall. A series
of vital questions were left unanswered in the agreement.

At first, both the state and the City of Stockholm acted as if the city
council would be able to handle the project with relatively little assistance
from the government, the Government Offices and Parliament. But
when, for frequently cited legal reasons, it was considered impossible to
entrust the implementation of the system to a local council – at least not
in the time available – the framework of the project had to change in
various fundamental ways while the preparatory work was being done.
The result was big implementation problems. The Government Offices
and several authorities, as well as the private entrepreneurs involved in
the project, were placed under serious pressure. The project was greatly
delayed, and very nearly collapsed because of the legal processes and
other difficulties that followed.

The fact that a decision to make motorists pay would lead to a defi-
cit of several billion kronor was probably not obvious in advance, nor
something that could be taken into account in negotiations between
the parties. As time went by, the unclear roles and the conflicts about
who should pay and how much the trial could be allowed to cost took
up a considerable amount of time and effort.

Nor can the timescale have been given much serious thought, bearing
in mind the hard-pressed circumstances in which negotiations took
place. Expecting a trial to be fitted into a government’s four-year term
of office was optimistic to say the least, given that according to the
agreement reached the trial would last for several years,. Legislation
needed to be passed, and the form the project would take was not even
at the sketch stage.

It was the national and City of Stockholm politicians who were
involved in negotiating concessions made by the Social Democrats
in order to stay in power: representatives of parties in the Stockholm
County Council, i.e. at the regional level where responsibility for pu-
blic transport lies, as well as those in suburban municipalities, were
left in the dark and eventually presented with a fait accompli. They
were sceptical about road charging almost to a man, and the failure
to consult them or to include them in some other way in the negotia-
tions awoke old antagonisms between the City of Stockholm and the
suburban municipalities.
Major problems were caused by the absence of any reasoned basis for the decision, and also by the way in which it appeared to have been made – by means of a political agreement at national level, where the tiny Green Party, supported by only 4.6 per cent of the voters, had pledged its support to the Persson government in return for getting the go-ahead for the congestion charging trial in Stockholm (among other things). Reaction to the project was very negative. From the start, reporting of it in the mass media was overwhelmingly critical, and there were aggressive campaigns by the Stockholm Chamber of Commerce, the Swedish Automobile Association and two non-socialist parties, the Swedish Conservative Party and the Swedish Liberal Party.

It was not only the broken manifesto pledge made by the newly-appointed Mayor of Stockholm, Annika Billström, that became a long-running serial in the media. The Green Party was also criticised for using its position as holder of the balance of power in Parliament in an inappropriate way to ‘foist on Stockholmers’ an ill-thought-out experiment. Even newspapers that were positive in principle towards the use of road pricing turned against the trial. A number of more or less independent experts were also sceptical, and among their comments was a claim that the allotted preparation time was totally unrealistic. At several of the authorities actively involved in traffic policies – at national, regional and local government level – managers and indeed civil servants in general were dubious about, or even averse to the trial. The general public were clearly opposed to it, and the view that the charges being proposed would have no effect became widespread. Opponents felt that Billström’s broken manifesto pledge and the small size of the Green Party justified relatively serious attempts to block the project. At certain times the strength of opposition made things difficult for those working to bring about the trial. Reactions from colleagues, friends, acquaintances and in the media were often outright antagonistic. Setting up the project was complicated by the fact that it was a political ransom paid in order to keep the Social Democrats in power.

The Green Party had traded in its very strong position resulting from its holding the balance of power in both Parliament and Stockholm City Council in return for the congestion charging trial and several other matters close to its heart. The party’s representatives were therefore extremely anxious to ensure that the congestion charging trial went ahead and turned out to be successful, which naturally contributed to their frustration at all the difficulties, the apparently imminent
collapse of the project, and more or less justified doubts regarding the real intentions of the Social Democrats.

It was also important for the Social Democrats that the trial should actually take place – at national level because the government could be defeated if the Greens did not support them, and at the local level because it would be even harder to defend the breaking of a manifesto pledge if the trial turned out to be a fiasco. But there was also strong opposition to the trial within the Social Democratic Party, and a tactical retreat was tempting for sections of the party if only a suitable excuse could be found. This was always a possibility. The interdependence between the national and local levels, from both a political and an administrative point of view, also complicated the setting up of the trial. This difficulty became even more acute when legal obstacles got in the way of the original intention of the City of Stockholm alone being in charge. But then again, it was only when the government became involved that the trial emerged as a realistic proposition. The interdependence between the various authorities concerned increased dramatically, and management of the project became more broadly spread; but at the same time the terms of reference became clearer. The Government Offices became fully involved in the work of planning, legislation and negotiation – to a much greater extent than had been anticipated originally. Government departments such as the National Road Administration and the National Tax Board became deeply involved. Among the difficulties the trial had to face up to and overcome were differences in administrative culture and powers between local authorities, the Government Offices and various state authorities. It was also necessary to persuade the Stockholm County Council and its wholly owned company Stockholm Transport (SL) to cooperate and bring about improvements in public transport during the trial.

To sum up, it is fair to say that the instigators of the project had conflicting and sometimes very important (and in certain cases ambivalent) interests to look after. There was also a big difference in political culture between the three parties involved – the Social Democrats, the Left Party and the Green Party. On several occasions this led to misunderstandings and conflicts. In addition, opposition was extremely intense, management decentralised, and for long periods of time faltering.

How was it possible, despite the lack of time and the very bad odds in general, for the project not only to be carried out, but even to win a majority of the votes in the Stockholm referendum? This article will
describe and analyse what happened before and during the congestion tax trial. The decision-making and implementation processes will be analysed with the help of research into policy changes and the conditions necessary to succeed with complicated projects in general; the implementation of political decisions in particular, and most significantly of all, matters of acceptance regarding the introduction of road pricing. The handling of charging in Stockholm in earlier years is described to start with, in order to examine the effect this had on the creation and handling of the congestion tax trial.

The description of the trial and its prehistory is based partly on written sources in the form of published works, legal judgments, assessment reports, party-political material, memoranda from meetings of the implementation organisation, the daily and technical press; and partly on interviews and/or e-mail correspondence with 56 politicians, officials and consultants involved, at both regional and local level, of which seven were asked primarily about the prehistory of the trial. They are listed in the bibliography. Interviewees have been promised secrecy in the sense that quotations and direct references have received their approval. Ten of the interviewees who took part in the trial in various capacities have read and commented on either the whole or parts of a preliminary version of this article. When various types of evidence to which we have had access have pointed in different directions, we have made this clear in our text.

In the concluding discussion we have used evolutionary comparisons, research into social dilemmas and theories about policy changes, in order to put what happened in perspective. We also ask whether the success of the trial is slowly developing into a fiasco for its foremost instigator, the Green Party. Or are we in fact witnessing a fabulous success?

Before the Stockholm Trial

Road charging in Stockholm – an idea with a history

The 1970s, aiming for traffic reduction

Towards the end of the 1960s, after twenty years of constant and unprecedented growth in car ownership, criticism of the unpleasant effects of life dominated by so much motor traffic began to make itself felt increasingly forcefully in Stockholm. It was part of a much broader criticism, both nationally and internationally, of the shortcomings of