

Congestion Pricing in Stockholm: Institutionalizing the Transport-Land Use Nexus

Written by Diane E. Davis and Amy Rader Olsson¹

DRAFT

¹ This case study is a revised version of an extensive research report originally produced by Amy Rader



TUT-POL

Transforming Urban Transport – The Role of Political Leadership

Sponsored by Volvo Research and Educational Foundations (VREF)

Hosted at the Harvard University Graduate School of Design

Table of Contents

Introduction.....	3
Reluctant Leadership?	5
Prior Attempts at Congestion Charging: Grand Political Negotiations and Their Failures (1991-2000).....	9
What Went Wrong?.....	14
Return of the Environmentalists	17
From Controversy to Congratulations: Annika Billström (2002-2006)	23
Cumulative Political Leadership? From Referendum to Permanent Policy	31
Back to the Future?.....	36
Conclusion: Political Leadership in Stockholm’s Transformation.....	41
References	45
Appendix A. Transportation Leaders in Stockholm	47
Appendix B. Transportation Timeline in Stockholm.....	48
Appendix C. Political Structure	48
Appendix 1. Interview Guide for Interviews	50
Appendix 2. Individuals Interviewed	50
Appendix 3. GDP and GRP in Sweden and Stockholm County 1940-2010	54
Appendix 4. Population in Sweden, Stockholm County and the City of Stockholm 1900-2013 and Average Population Change.....	55
Appendix 5. Maps of Stockholm County and the City of Stockholm	56
Appendix 6. The Stockholm Subway and Metropolitan Transit Lines.....	58

This case was written by Diane Davis and Amy Rader Olsson for the project on “Transforming Urban Transport – the Role of Political Leadership,” at Harvard’s Graduate School of Design (GSD), with financing from the Volvo Research and Educational Foundations (VREF). The authors are responsible for the facts and the accuracy of the information in the case, which does not necessarily reflect the views of VREF or GSD.

Introduction

In August 2007, Stockholm introduced a congestion charge for cars crossing the city's inner boundary, aimed at reducing traffic flows into central city areas.² The decision followed a seven-month trial and a public referendum. At that time, no other city had implemented a congestion tax based on the results of a referendum. Today, Stockholm is known world-wide for the successes of its congestion-charging program and its early adoption of the policy. The system comprises a cordon around the inner city, with number plate recognition cameras at 18 charging points automatically registering vehicles as time-differentiated tolls apply in each direction. As of January 2016, tolls range between SEK 11-35 (USD \$1.35 to \$4.25) depending on the time of day, with a maximum daily charge of SEK 105 (\$12.80).³ Drivers arrange for charges to be automatically deducted from their bank accounts or pay their monthly invoices on the website, over the phone, or at designated stations. Since its introduction, the congestion charging system has expanded beyond the urban core and raised charges, with continued public approval.⁴ With sustained decreases in traffic volume and congestion, along with generated revenues, both direct and leveraged from the national government, for regional transport investments, the program has furthered the city's reputation as one of the most sustainable cities in Europe.⁵

Stockholm's success in implementing congestion charging mechanisms is worth examining not just because a similar referendum failed in the country's second-largest city (Gothenburg),⁶ thus suggesting that something novel occurred in Stockholm that involved strategies and tactics not readily explainable by general theories about Swedish planning capacity or the country's democratic institutions. Just as important, the

² Sixty-six years earlier almost to the day, on June 16, 1941, the Stockholm City Council voted to build its first subway line, originating in Stockholm's inner city and extending to its southern and western periphery. This decision, although politically divisive and highly controversial at the time, laid the groundwork for the continued spatial expansion of the Stockholm metropolitan area.² Over the subsequent decades, the subway helped foster new suburban developments and accelerating demand for the expansion of a highway network that reinforced growing automobile usage and a host of congestion-related problems including traffic bottlenecks and increased carbon emissions.

³ Previously, tolls ranged between SEK 10-20 per direction and capped at SEK 60 for the day.

⁴ The congestion charge almost doubled due partly to higher charges and partly to the inclusion of Essingeleden, the western part of the famous "Ring."

⁵ In 2010, Stockholm was the first city to be named Europe's Green Capital, an award bestowed by the European Union. It has been followed by Hamburg, Vitoria-Gasteiz, Nantes, Copenhagen, and most recently, Bristol.

⁶ In 2013, Gothenburg introduced congestion charges, without a trial period, against the results of the referendum, and in the absence of heavy traffic and congestion, largely for the purpose of financing regional transport investments following the national government's prioritization of investments receiving regional co-funding for the national investment plan in 2010-2021.

introduction of congestion charging has produced fundamental change in three major arenas: 1) planning institutions and practices, particularly those that help connect transportation to land-use; 2) civil servant-politician relationships, primarily in ways that helped transcend previous divisions over the role of expert knowledge; and 3) quotidian as well as partisan conceptions of what conditions best sustain a competitive, prosperous, and eminently livable city. Today, congestion charging is now enthusiastically embraced by a wide range of stakeholders ranging across a broad political, ideological, and governance spectrum, including those who ardently fought the introduction of such measures for close to 40 years. Although, the congestion charging decision of 2007 followed decades of debate and analysis regarding demand management solutions and new sources of financing, almost all of which failed to find permanent and wide-ranging support, today politicians and technical experts sit more comfortably at the same table when discussing the value of connecting land use and transportation decisions, and using technical expertise to achieve political goals, and vice-versa, in large part because of the widespread view that congestion charging is a valuable method for financing urban infrastructural investments.

This case study investigates how and why political leaders in Stockholm reversed four decades of opposition to congestion charging, bringing Green Party advocates Conservative, Social Democratic, and Liberal Party protagonists together to support this policy despite years of political conflict, considerable technical complexity, and initially negative public opinion.⁷ In narrating how and why congestion charging was decisively introduced in 2007, we take as our point of departure the unique social, political and spatial context of Stockholm -- not just the so-called consensus culture associated with party negotiation within Swedish social democracy,⁸ but also a topographical challenge that has plagued Stockholm's governance since its inception: how to transform a series of small islands comprising the inner city into a vibrant and well-serviced metropolitan

⁷ The case is based on a review of historical documents, plans and reports, complementary data on historical population and income trends, and not least on interviews with leading politicians, civil servants and NGO-representatives, both active and retired. The 14 interviews listed in Appendix 2 were undertaken in 2014 based on an interview guide (Appendix 1). Other individuals were interviewed as part of the process of determining relevant transportation decisions, including Gunnar Söderholm, Head of the Stockholm Environment and Health Protection Administration, and Ulla Hamilton, City of Stockholm Vice Mayor for Transportation, Labor and Commerce. During a return visit in 2015, several new actors were interviewed, and some additional contacts were re-interviewed. A list is included in Appendix 2. Two of the authors of the original report, Bo Wijkmark and Björn Hårsman have significant planning and research experience in the decisions discussed in this case, as employees of the City of Stockholm and the Stockholm County Council. Bo Wijkmark in particular began his career working with the leading city politicians in the 1950's. Because he was involved at the highest political level in all strategic issues related to land-use, transport and housing during the next four decades he has also shared his unique personal knowledge of the leading politicians participating in the decision-making processes.

⁸ Sweden is a Western parliamentary multiparty democracy, with universal suffrage and elections at the national, regional and municipal levels on the same day every four years. It is often said that Swedish voters choose a party rather than an individual candidate, though dynamic and charismatic politicians have boosted political parties in Sweden as elsewhere. In contrast to nations with presidential rule and/or Anglo-Saxon traditions, Swedish politics reflects collective decision-making at all levels; leading Swedish decision-makers do not have the status of say the governor of a US state or the Mayor of London.

region.⁹ We contextualize our analysis with close attention to the shifting framings of the problem of congestion, highlighting how and why the decades-long stalemate over road pricing owed partly to conflicts within and between civil servants and politicians about the purpose of transport policy. For politicians, it was a way to secure or alienate the interests of their political constituencies, while for planners support had to do with technical concerns about mobility. It was only when congestion charging was both strategically reframed and widely recognized as addressing the concerns of multiple and competing constituencies that its adoption became definitive.

With this backdrop, the bulk of the upcoming narrative focuses on how actors and institutions used both conflict and consensus to form an effective coalition of supporters capable of pushing forward a pilot project and a citizen referendum on congestion pricing. It will lay out the history of political coalition-building around transport policies, demonstrate how successes and failures in widening popular support for car vs. other transport infrastructure priorities fundamentally changed the conversation about congestion charging, and show that the political and environmental fallout from earlier decision-making processes eventually created actionable political space for introducing a pilot program and citizen referendum, both of which paved the way for the permanent adoption of congestion charging.

Reluctant Leadership?

In understanding the role of political leadership in achieving these outcomes, the question emerges as to whether a single individual was responsible for transcending decades of political conflict over road tolls, whether it was Swedish consensus politics as usual, or whether these gains were the inevitable consequence of the growing problems of urban development, including the expansion of the city through investments in mass rapid

⁹ Stockholm's dense inner city is located in the only natural outlet to the Baltic Sea from one of Sweden's most strategically important lakes - Lake Mälaren - with broad expanses of water between the islands upon which the city has been built from the Middle Ages onwards. Its historic center is still Sweden's administrative, cultural and financial center. A corridor of water divides the city, and indeed the entire region - in a northern and a southern part, and the city center can be reached from several directions only by travelling over - or under - water (See Appendix 5 for maps of the county and city areas). Because of these topographical constraints, transportation improvement measures therefore almost invariably entail conflicts between accessibility and conservation goals. Suggestions that Stockholm build tunnels as a transportation solution date back to about 1900. Dynamite was a Swedish invention (Alfred Nobel), for good reason: large parts of Stockholm rest on bedrock. Early in the 1930s, Stockholm had built a first tramway tunnel through the southern part of the inner city for rail routes from the southern suburbs, which became the first part of the future subway (*tunnelbana*), but at the time it was not up to subway standards.

transit technology linked to suburban housing development.¹⁰ To a certain degree, such arguments may not necessarily be mutually exclusive. It is not uncommon for Swedish politicians to underscore that successful policy-making involves both “balancing conflicting goals in society” and acknowledging the weight of history.¹¹ And as further noted by the same observer, himself a key leader in the 2007 political party negotiations (known as the Stockholm Negotiations) that made congestion charging a national policy:

I very often say that, “What has to be done will be done, sooner or later.” And if you look at political history in general, you can see that. Sometimes it takes longer and sometimes it goes very quickly. Yet it’s all about political timing, who is in charge, if they are willing to take risks to change things, or if they are not.

The successful adoption of congestion charging in 2007 did in fact build on ongoing discussion and compromise that unfolded over several decades, with its successes partly a consequence of continuous political negotiation between different political parties, primarily but not exclusively the Social Democrats and the Greens, on one hand, and the Liberals and Conservatives on the other. These political parties were influenced by the articulated interests of their constituencies, with the former coalition more open to both environmental sustainability priorities and socially inclusive public projects associated with the welfare state, and the latter more concerned with strengthening market conditions and promoting individual freedom. In this political landscape, support for congestion charging was historically identified with the former coalition, while the latter tended to embrace infrastructure policies that expanded rather than restricted automobile users. Although the idea of some sort of congestion toll had been on the Stockholm metropolitan area’s transportation planning agenda since the 1970s, agreement remained elusive.

Given this history, the successful adoption of congestion charging in 2007 must be traced primarily to actions initiated by Annika Billström, who served as Social Democratic Mayor of Stockholm from 2002-2006.¹² Her 2002 involvement in the promotion and adoption of this policy was particularly noteworthy given the fact that while campaigning

¹⁰ Many associate the Swedish brand of social welfare policy with the long period of Social Democratic Party-led government for several decades starting in the mid 1920’s. In fact, and in Stockholm in particular, the balance of power between the left and right party blocks has shifted back and forth several times. Even so, Stockholm has been able to make a number of transformative urban development decisions, including the construction of a networked mass transit system and the building of a “million homes,” which although may not in hindsight be universally positive, have irrevocably transformed the character and morphology of the city and the metropolitan region. Part of the reason for this may be that the period between about 1930 and the mid 1960’s was one in which there was consensus between the Social Democratic Party and the Liberal party regarding priorities for social welfare achieved through the redevelopment of the built environment based on modernist and functionalist principles associated with post-war planning in Sweden.

¹¹ (Personal Interview, Carl Cederschiöld, June 2015)

¹² Billström, Stockholm’s first female mayor, was appointed in 2002 by the City Council after winning the municipal election and forming a majority with the Left party and the Green party.

for Mayor, she made strong public statements against congestion charging, and promised that if she were to be elected Mayor Stockholm would not pursue congestion charging during the 2002-2006 legislative period. Interviews with environmental activists suggest that her forceful opposition to congestion charging may have been a slip, made in the heat of campaigning. They base those views on the fact that Billström had advocated both publicly and private for traffic management policies in prior periods, and was on record as being open to a wide range of measures intended to protect the environment. The Social Democratic Party's engagement with the Green Party over the past several decades helps explain Billström's posture in these regards, as was the antagonism to the environmental movement (and its signature issues) by her main electoral rivals in the Conservative party. Others interviewed for this research, however, have suggested that Billström's initial reluctance to embrace congestion charges during her mayoral campaign was a purposeful political strategy intended to woo more centrist elements to her side, particularly those identified as Liberal Party constituents, who were not known to be generally supportive of traffic calming measures but were likely to affirm some of the other key urban elements in her Social Democratic platform.

Whatever one's interpretation of Billström's personal and political motivations, there is little doubt that the origins of the decision to adopt congestion charging traced both to distinctive political conditions and her own political leadership. After all, initial discussions of road charging in the 1970s pre-dated the political ascent of the Green party, and thus failed to insert itself into the political agenda in any fundamental way. The topic then re-emerged within the context of partisan conflict over road tolls; yet as seemingly successful agreement between advocates of road pricing and highway development in the context of a grand negotiation among the major political parties, brokered by Bengt Dennis in 1991 lead to only temporary agreement which ultimately collapsed.¹³ The actual piloting of congestion charging and its successful adoption only occurred once Annika Billström came to office and after the public embrace of her pilot program irretrievably inserted congestion charging into the local and national policy agenda.

Many observers view Billström's about-face in support of congestion charging in 2002 as coming in response to pressure from Göran Persson, leader of the national Social Democratic Party, who wanted Billström to agree to congestion charging for the sake of forming a national electoral coalition with the Green Party. And although some observers claims that it was Billström's aim all along to push forward this policy once the election was over,¹⁴ there is no doubt that it was her commitment to holding a pilot trial

¹³ Several interviewees suggested that renewed support for congestion charging in the early 1990s came partly from recognition of events outside Sweden. When Norway inaugurated its road charge system between 1986 and 1991, the idea that Stockholm might also introduce a charge was discussed widely, thus helping catapult the topic into the political sphere. Singapore's experience with time-differentiated road charges (particularly its 1998 revisions), and London's 2003 introduction of congesting pricing also were seen to be important predecessors, giving the idea a certain legitimacy in Swedish political circles and, eventually, within the population as a whole.

¹⁴ Personal interview, Goran Cars, July 2015.

of the program, announced shortly after her party won the Stockholm election, that helped turn this long-simmering political firestorm into a real possibility. Although the institutionalization of the congestion tax (including the legislative changes and the subsequent revenue stream) was not formalized until the end of her administrative term, and although the move from a pilot program for Stockholm promoted by the Social Democrats and Greens to a formalized national policy with support from Liberals and Conservatives was not institutionalized until it survived a round of partisan negotiations in 2007, there is no doubt that Billström was a key political force in keeping the process moving forward to fruition.¹⁵

The million dollar question, then, is what made it possible for Annika Billström to succeed where scores of other politicians failed? Part of the answer lies in the decision to mount a pilot program, which to a great degree allowed her to save face. (In an interview, Karolina Isaacsson called this a “clever way to deal with the difficulties that came up.”) As a candidate forced to backtrack on initial public opposition, Billström’s announcement that there would be a trial, and that it would be followed by a public referendum, made it possible to keep open the possibility that congestion charging would ultimately be rejected by a majority of voters. This was a politically savvy decision. Just as important, she justified her strategy in financial as well as environmental terms. In particular, Billström made clear that the revenue sources generated by this new pricing mechanism would be completely transparent, not just in terms of who would pay, but also who would be served by the pilot program.

Road charges—not congestion charges—had been deliberated over for years and were thoroughly analyzed and proposed as part of various packages and regional plans. Although in earlier decades preoccupation centered on road tolls (and not congestion charges *per se*), it is evident that the effect of a new toll to reduce total vehicle miles travelled and to achieve a better spread of traffic to avoid congestion peaks was a priority by environmentalists and transportation planners from the 1990s. In other words, the road charge gradually became discussed as a time-differentiated toll, and from there the moniker “congestion charge” was only a short step away (seeing it as time differentiation was directly related to relieving congestion peaks at certain times of the day). Even so, reconstituting the initiative as a national level tax rather than a local charge was considerably more complicated, and it wasn’t until this was accomplished that the full gains of congestion charging could be institutionalized. This is where Billström’s leadership mattered. The successes she achieved by masterfully managing the trial period made it possible to assemble a much broader coalition of support behind congestion charging policies, packaged in the form of a national tax that itself laid the foundation for more much better integration of transportation and land-use planning.

¹⁵ This agreement was brokered by Carl Cederschiöld, whose 2006 “Stockholm Negotiations” brought a wide range of parties to the table for an open dialogue, a process which will be discussed in depth in upcoming sections.

Prior Attempts at Congestion Charging: Grand Political Negotiations and Their Failures (1991-2000)

Annika Billström's decision came after a history of failure, something which may partly explain her initial reluctance to embrace congestion charge. Despite Sweden's long history of commitment to preserving the environment, its support for public transport, and a willingness to consider traffic management in achieving urban planning objectives, the issue of congestion charging had long been the third rail of Swedish party politics.¹⁶ With the territorial extension of the metropolitan area automobile ownership on the rise beginning in the late 1950s and early 1960s, new ideas came to the table, of which congestion charging was one. As early as the 1970s, urban planners had unsuccessfully advocated for some form of traffic calming measure, suggesting that the issue of congestion charging thus was anything but new. When it re-emerged again in the early 1990s, in the context of a grand negotiation headed by Bengt Dennis, it brought major political conflict and a compromise which was relatively short-lived. A closer examination of this period, in which a national commission charged with negotiating consensus on transportation infrastructure (including a form of road tolling) eventually failed, will help us better understand what was done differently in the period from 2002-2006 when efforts to introduce congestion charging were finally successful. It will give us insight into the different leadership styles of Bengt Dennis and Annika Billström, and it will shed light on why negotiation strategies may not always lead to policy success.

In 1990 the national government appointed three negotiators, one for each metropolitan region (Stockholm, Gothenburg, Malmö), tasked to work together with regional representatives to arrive at an agreement regarding infrastructure investments for the coming period.¹⁷ They were charged with considering a set of policies to better the

¹⁶ This was particularly so in Stockholm, something which can be traced to its 1941 decision to build a subway, a relatively controversial policy that ultimately brought Social Democrats and Liberals together in a political pact that laid the groundwork for the post-WWII expansion of the city's subway network. Today, the subway connects the majority of Stockholm's neighborhoods (and the municipalities surrounding it), thus contributing to Stockholm's enviably high share of public transit use compared to other Swedish regions and other world cities. Even so, the expansion of the city's footprint through subway investments, reinforced through a partisan political compromise that linked new worker housing development (on city-owned land) to transport infrastructure, generated a new policy environment in which authorities could no longer rely on public transport policy to address traffic management concerns.

¹⁷ With urban growth escalating in the 1980s, in 1988 the national government, under pressure to improve the situation, appointed State Secretary of the Treasury Jan O. Karlsson as the chief political advisor to the prime minister's cabinet (*statsrådsberedningen*) with responsibility to provide recommendations of a wide range of policies to improve Sweden's metropolitan areas. Karlsson's analysis (summarized in SOU 1989:69: *Metropolitan Regions in Transition*) noted that in all three areas with long trips between households and workplaces (still enviably short by many international standards), unacceptably low accessibility for commercial transports, environmentally harmful congestion and emissions. Railways and

environment, improve accessibility, and support continued economic growth. The financing of any such large package of investments was a key issue, and road charges were one of several opportunities discussed for generating such funds. The director of the Bank of Sweden, Bengt Dennis, was appointed to negotiate with the Stockholm region and, after some political twists and turns, produced an agreement with three parties: the Liberals (*Folkpartiet Liberalerna*), the Moderates (the more conservative party, *Moderaterna*) and the Social Democrats (*Socialdemokraterna*). The so-called “Dennis agreement” or “package” accommodated proposals to build the most important motorways and subway extensions sketched out in the 1950’s general plan and regional plan and were thus directly linked to the 1941 subway decision as well—and also reiterated in the (then) current regional plan.

Bengt Dennis was a capable and well-respected negotiator who was given considerable discretion to proceed as he saw fit, based on quite loosely articulated directives: “identify policies for the transportation system as a whole that will improve the region’s environmental situation, increase accessibility and create better preconditions for regional development.”¹⁸ Dennis and the other negotiators were asked to reach long-term agreements for investments and financing for the coming ten year period. They were also directed to involve relevant national authorities, municipal administrations, the Stockholm County Council, and the business community.

The need to find financing solutions for suggested investments was reiterated several times as a principal mandate: “Increased national expenditures should not be expected (for the transportation investments). Negotiators should instead identify possibilities for increased cooperation with private actors and for fee based financing as I have previously stated in my proposition regarding certain industrial policy issues (Prop 1989/90:88) with the restriction that the taxation system should not be affected, either by the imposition of new taxes or through earmarking of current tax revenues.”¹⁹ The interest in fee-based financing was probably both motivated by budget concerns heightened by a looming economic crisis due to an erupting banking crisis and by a zeitgeist strongly influenced by the Reagan/Thatcher ambitions to “roll back” public spending, stimulate private firms, and expand the freedom of maneuver for the individuals and families. If one added to that

road investments had not kept pace with regional growth and existing infrastructure received insufficient maintenance. Coordination between the national government as steward, planner and financier of the country’s infrastructure, planners and financiers and local and regional authorities had faltered. Yet to achieve these “technical” planning aims, Secretary Karlsson recommended that the national government appoint three chief negotiators. They would coordinate local, regional and national interests in major transportation infrastructure investment packages for Stockholm, Gothenburg and Malmö, which were originally undertaken as a means to build political support for the Öresund bridge between Malmö and Copenhagen. The Minister for Communications accepted the idea and formalized a proposal for their work (*Kommittédirektiv 1990:21*). At the time this was understood to be natural next step to move negotiations between the national government and the three city regions forward.

¹⁸ Kommittédirektiv 1990:21, Communications Minister Georg Andersson. Parliamentary decision 1990-04-05

¹⁹ Ibid.

context the positive experience of urban toll rings in Norway,²⁰ it seems almost self-evident that the already initiated discussions of the Öresund Bridge were based upon the assumption of full financing by a road toll.²¹ In a similar fashion, a somewhat later plan to establish user fees for financing the major part of a new railway line from Stockholm's city center to the Arlanda international airport also received strong support. As will be discussed shortly, the eventual congestion charge would in fact technically be a new national tax, but decisions regarding these formal issues were as yet far on the horizon.²²

To achieve these aims, Dennis opted for a negotiation strategy different than that taken by his counterparts in Malmo and Gothenburg. Namely, he chose to negotiate with the political parties rather than with high ranking representatives associated with local or regional public authorities. This was an interesting choice, and one that was ultimately costly. Dennis knew that the most important politicians in the County Council and in Stockholm and surrounding municipalities were also individuals with strong positions within their respective political parties. If a coming election were to put other parties in power, he calculated that both the winning and losing parties would, in theory, remain²³ and thus honor any transport agreement.

The investment package proposed by Dennis was based upon an existing Regional Plan. This led some observers to suggest that “the negotiator and his staff saw the construction of the package basically as a mathematical problem” (Susanne Ingo, interview). The balance they strived for concerned the total investment volume versus financing options, investment in roads versus in public transport as well as between the political parties involved – all of them should have to get something they wanted but also accept something they did not want. Leading politicians from the County Council and the City of Stockholm agreed to participate. Negotiation was aided by the fact that all local political parties were concerned about the state of Stockholm's infrastructure and hopeful that the national government had provided an opportunity to reach decisions regarding major improvements.

²⁰ When Norway introduced cordoned tolls around a number of cities in the 1990s, Swedish transport planners saw the technical possibility of establishing automatic payment systems in urban areas and the political possibility of gaining public approval of road charges by linking revenues to transport investments (Eliasson 2009b).

²¹ The construction of the railway began in 1994, and the bridge in 1995; both links were opened for traffic in 1999.

²² Somewhat later, the prime minister did in fact promise increased revenues for each region of which 3,5 billion SEK would fund public transportation in Stockholm.

²³ It is worth noting that Swedish voters cast votes for political parties in their municipalities and county councils, not individuals representing parties in districts. For each party there is a list with names of the nominated persons in descending order decided by the respective political party. Voters may cross one of the persons if they want him to come first. After the election the parties have limited discretion to appoint party members to fill mandates won in the general vote. In other words, a powerful figure in a major political party would undoubtedly remain on the local council, even if her party was no longer in power.

However, the various political parties had fairly clear positions regarding various parts of the package, all of which complicated negotiations by limiting the terrain for consensus:

The Social Democrats (S) prioritized new investments in public transit as well as the north and south parts of the ring (*Norra länken, Södra länken*). They were willing to discuss road charges. They saw the ring road as a critical strategy to bringing Stockholm's (wealthier) northern and (more struggling) southern halves together.

The Moderates (M) supported both public transportation and all parts of the ring, including the highly contentious eastern part (*Österleden*). They were willing to discuss road charges, but only if revenues were to be used to build the new roads.

The Liberals (Folkpartiet, FP) were positively inclined toward both road and public transport investments, with the important exception of the western outer bypass (*Västerleden*, later known as the Stockholm bypass or *Förbifarten*). They supported road charges, both as a demand side management scheme to reduce inner city congestion and to finance both new roads and more public transport.

The other parties (the Left party, Center Party, Green Party, the Stockholm Party) were generally in favor of public transportation and reducing car travel. They were against the major road projects (the remaining parts of the ring), particularly the eastern part and the western bypass.²⁴

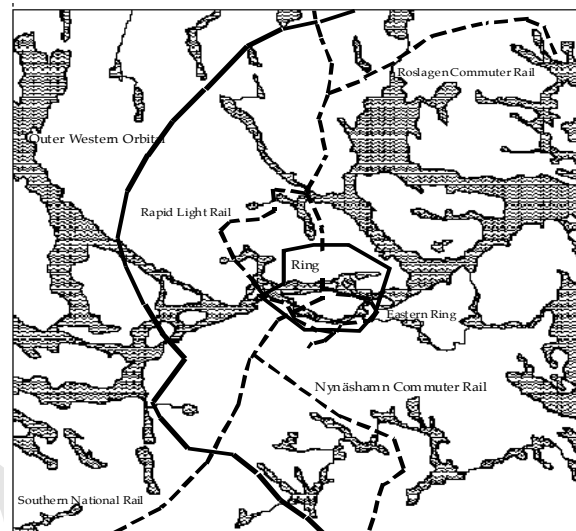
Party positions regarding the Dennis package (municipal and county council levels).

	Western bypass	Complete ring around inner city (western part already built= Essingeleden)			Road Charges	Public transport investments
		North ring section	Southern ring section	Eastern ring section		
	Outer ring road: "Västerleden" aka Förbifart Stockholm	North ring section	Southern ring section	Eastern ring section		Subway, bus lines, alternative fuels, rail
Social Democrats	Yes	Yes	Yes	no/maybe	maybe	yes
Moderates	Yes	Yes	Yes	yes	No/Maybe, if used to finance roads	yes
Liberals	No/maybe	Yes	Yes	yes	yes	yes
Center	No	?	?	no	yes	yes
Left	No	?	?	no	??	yes
Green/ Stockholm Party	No	No	No	No	Yes	Yes

²⁴ Some also became increasingly critical to the northern link, which crossed a national park with sensitive ecological and cultural values.

The Center, Left and Green Parties (and the Stockholm Party) were not invited to complete the negotiations since they were opposed to major road investments at the core of the package.

The western link (left) and Ring around inner Stockholm, from the Dennis Agreement.



After extensive discussions both individually and in plenum, Dennis announced that he had constructed a package of investments and policies that would meet the three predetermined goals and that also reflected a broad spectrum of political interests (Interview, Bengt Dennis). This ultimately meant that the so-called “Dennis Package” comprised both road and rail projects, all drawn from existing plans, as well as a vaguely defined road toll system.²⁵ (The specific language used—the distinction between a *road toll* and a *congestion tax*—had strong political and legislative implications as well as an impact on public perception.) Yet precisely because a clearly established objective had already been set by Dennis, political party representatives that were not prepared to accept the basic structure of the package (for example, the inclusion of both roads and rail projects), were informed that negotiations would proceed without them or their parties. The fact that a Center-Right coalition had just come into power in the 1991 national elections, a year into the negotiations, may also have changed Bengt’s mission and his willingness to keep the far left parties at the table.

Ultimately, the only political parties left at the table—together representing an electoral majority—were the Social Democrats, the Liberals (*Folkpartiet*) and the Moderates. And it was because of this that later observers suggested that the Dennis Package was

²⁵ Road charges are explicitly mentioned.

hardly a compromise, but rather, a platform for agreeing on highly circumscribed policy recommendations accommodating the combined interests of the three major parties. As Former Liberal Party (FP) politician and city director of urban planning in 1992-96, Ulrika Francke, said in an interview, “(t)here were no compromises. Everybody got everything.” Indeed, the package included a variety of projects geared towards all constituents, including road investments, transport investments, and road charging, manifested in an agreement on a large-scale transport investment package partly financed by road tolls.

What Went Wrong?

Despite the initial success in formalizing this tri-partite agreement, the national government under the leadership of the Social Democrats, which prevailed in the 1994 elections over the Center-Right coalition, ultimately withdrew its support of the deal in 1997, and the array of negotiated compromises known as the “Dennis Package” subsequently fell apart. The longer-term failure of the Dennis Package not only raises questions about the value of nationally-convened negotiations in advancing congestion pricing in Stockholm and elsewhere, they also provide an opportunity to critically examine the conditions under which certain negotiation strategies or particular styles of leadership may not always produce positive outcomes.

In an interview with Bengt Dennis for this study, it is clear that he saw himself as an objective conciliator whose most important role was to identify a balanced package of investments and policies, of roads and public transport investments, and of public and private forms of financing, that held the potential to unite a politically divided constituency.²⁶ In autumn 1990 the proposal was reported to the government and left to the participating parties to negotiate details. The three parties that remained in the negotiation had not yet reached agreement on several parts of the package that they would have preferred to skip: The Western Bypass for the Liberals, the Eastern part of the ring for the Social Democrats, and road charges for the Moderates. Therefore, after several delays during which the parties fought over the most contentious parts of the package (most importantly the western bypass and the road charges), the parties agreed to

²⁶ Some considered user charges to be a move towards less public financing of transport (i.e. financing from existing government revenues). Also, Dennis was explicitly instructed to seek opportunities for an increased share of private involvement in transport investments through public private partnership, BOT agreements, etc. An agreement in principle to allow road charges was, at the time, seen as critical for attracting private investment as a return on their investment. The *Storstadsutredningen* had proposed an infrastructure company in Stockholm that could collect development charges based on expected land rent increases due to transportation improvements, a notion that is in principle much like the current logic behind the eastern subway extensions, albeit without the chartering of a new institution.

enter a second phase of negotiations (which came to be called “Dennis II”). It involved the same actors but without Dennis in charge; and the group finally reached agreement in September 1992.²⁷ This package had basically equal investments in road and public transportation, but the timeline for the project start focused on the major roadways because of the longer planning horizon for the roads.²⁸

Ultimately, however, this carefully negotiated package was “scrapped” “(in the words of Magnus Carle) after the newly elected national government of Prime Minister Göran Persson withdrew support for the original agreement. Persson, a Social Democrat, had been elected but his party failed to hold majority in the parliament. To gain parliamentary support, he therefore reached out to the Center Party, which in turn spurred him to re-think the Dennis Package and the commitments it entailed. Although the needs for a wide range of transportation infrastructures still existed, as did the dilemmas of financing the wide range of investments enshrined in the agreement, individual elements in the package continued to be controversial, particularly with respect to their assessment from the parties who had been expelled from the negotiations. More significantly perhaps, the fact that “everyone got what they wanted,” at least everyone still left at the table, meant that the costs of carrying out the commitments were soon calculated to be enormous. This in turn shifted the policy discussion in the post-agreement period, with the focus on the economic costs of compliance with the package.²⁹ According to those interviewed for this study, the expectations and calculations of financing transport priorities played a major role in ongoing discussions after 1991, particularly since the package of infrastructural projects required funding far in excess of the annual national budget for Stockholm’s transportation system.

Although the remaining parts of the proposed ring and the Western Bypass (two principal components of the package) could potentially be funded using a road toll system, there were concerns that agreeing to toll revenues would give the national government an excuse to reduce routine annual national funding for transport infrastructure. Several of those interviewed noted that the estimates of costs for complying with the Dennis Package increased every time they were recalculated: from 28 billion SEK to 36 billion SEK between 1990 and 1992, for example. With Sweden headed into a serious economic crisis after the 1990s, the idea of financing new transportation infrastructure in

²⁷ The political leaders did, as promise, achieve formal approval of the Dennis package in the city and county councils. The parliament never actually formally approved the Dennis agreement, but had mentioned it in motions and documents, had discussed national co-financing arrangements, and had directed the national road and rail administrations to support continued planning. Therefore it was considered “approved” by the State.

²⁸ Many of the public transportation investments could be (relatively) quickly implemented, such as dedicated bus lanes/new bus services, renovation of existing rail lines, and the new streetcars.

²⁹ It is worth noting that Bengt Dennis was also known for his actions in eliminating regulations of the credit market, actions which some have argued contributed to the Swedish financial crisis of 1990-94. The deteriorating economic conditions also had a bearing on the national government’s willingness to comply with the Dennis Package after 1996, given the precarious state of the budget in the context of economic crisis.

Stockholm with nationwide cuts in areas like social services soon became unthinkable, particularly for a Social Democratic administration. In addition, the Package had incorporated plans to install a third rail through Stockholm, a project that held the potential to disrupt several ongoing real estate projects and thus came into conflict with developer interests, producing unease from still other corners (Interview, Magnus Nilsson). According to Magnus Nilsson, “The Dennis Package was a puzzle—you can’t pull out one piece because it will all fall apart,” and the third rail may have proved to be that piece.

Just as important, the so-called “negotiation” process used to arrive at consensus remained highly controversial, particularly but not exclusively from those who had been excluded in the final round. This came back to haunt the Social Democrats. Although many observers saw the package as balanced in the traditional political sense and as defined by Dennis, considering that it accommodated differences of opinion between the three remaining parties, others saw the outcome as produced by a so-called “terror balance.”

We were given to understand that this was a negotiation, and that we were expected to have opinions! Dennis didn’t seem to have the same idea—he presented a complete package and of course many of us had opinions about that. The left wing parties, the greens and the left party, didn’t want new roads and bypasses, and so Dennis basically told them that they were not welcome to continue. It wasn’t a particularly good strategy, because those parties never felt any loyalty to the package after that—not even to the parts of the package they were in favor of—! Because they had been shut out of the negotiations. This is why the Dennis Agreement wasn’t sustainable in the long term. (Interview with Carl Cedershiöld³⁰)

Although it failed, the Dennis Agreement’s road toll proposals did open the door for later positive decisions regarding congestion charging. While road pricing momentarily fell off the political agenda, the surrounding debate and negotiations forged an enduring link between toll revenues and future transport system improvements. Meanwhile, various planning agencies, consultancies, and researchers continued investigating traffic management schemes, including Singapore’s experience with time-differentiated road charges (particularly its 1998 revisions), and London’s efforts to introduce congesting pricing.³¹ The long and unusually complicated process of successfully adopting congestion charging would additionally entail opinion surveys, media debates, a full-scale charging experiment, referendum, and final decision that involved political actors at all levels—although primarily in the city council and the national parliament.

³⁰ Former Vice Mayor of Finance in Stockholm and national negotiator for a large transportation package that resurrected the Dennis package projects in the late 1990’s.

³¹ These include the National Environment Protection Board, Transport and Communications Research Board, National Road Administration, Swedish Society for Nature Conservation, the Regional Planning Office, and the Swedish Institute for Transport and Communications Analysis

Despite these very substantial outcomes, when asked to discuss the importance of the Dennis Package in the history of transportation planning and policy in the Stockholm region, the agreement has been described as less as an exercise in consensus building and more as an attempt to actually build the extensive transport infrastructure network first proposed in the context of the 1960 motorway plan (Interview with Måns Lönnroth)³² And indeed, many of the projects introduced in prior regional plans and subsequently resuscitated in the Dennis Package were longstanding projects proposed by regional planners in the 1960s and 1970s that have since been completed, such as the Northern Link in 2004.³³ Such developments not only explain why so many transportation planners have and continue to laud the Dennis Package. They also suggest that the strategy of bringing the major national parties together to forge an agreement was considered to be one way of achieving a transportation infrastructure agenda that had been advocated by some of Stockholm's leading regional planners for decades.

Return of the Environmentalists

Formalizing a comprehensive regional transport plan and securing the political confidence to insure that such a long-term strategy can be implemented are two very different things. In retrospect, it is clear that Bengt Dennis may have been penny-wise but pound-foolish in his decision to expel the Greens and other smaller parties from the national negotiating table. Yes, narrowing the number of parties involved in negotiation does make agreement more likely. But it also can generate considerable resentment on the part of the excluded. The Green Party, in particular, was not going to forget this insult, and as their popularity grew in Sweden, they soon became a formidable force

³² After the completion of the subway in the 1950s, urban and regional planners turned their focus to the outer transverse link between the northern and southern halves of the metro region, through construction of a Western Bypass crossing the Lake Mälaren, was identified as the major planned motorway outside the more densely built areas of the region. The ring around the inner city subsequently became an increasingly important ingredient in the new plans; within the ring, car use would be quite restricted, but outside the inner city automobile use would be facilitated. These elements were all first articulated as proposals in the Motorway plan in 1960 and the 1965 Subway Plan for the Greater Stockholm.

³³ A history of planning in Sweden shows concerted efforts to rationalize urban growth through regional planning. In 1966 the Regional Planning Association (an association of all municipalities in Stockholm County including Stockholm) published a "sketch for a regional plan" which was at the time considered to have violently exaggerated forecasts and visions for future growth by late 1960's standards but which in hindsight predicts future demands for urban infrastructure and amenities fairly well. The regional plan first based on this "sketch" and then more formally proposed in 1970 met with broad criticism for its expansionist tone and was not adopted, although certain elements of it did finally get built decades later. Subsequent regional planning processes became the responsibility of the new *Storlandstinget*, the Stockholm County Council (1970), which represented both Stockholm and the surrounding county but mostly in an advisory capacity owing to the reluctance of local authorities to give up their authority over land use planning.

willing to re-open the debate about pro-environmental elements that had not been accommodated in the package.

The aims of environmentalism cannot to be taken lightly in assessing the negative political impacts of the Dennis Package, particularly when such priorities have been championed by an increasingly influential political party in a democratic system proud of its consensus culture. Sweden is a country with breathtaking forests and waterways where large cities were the exception more than the rule. Many urban residents still spend summers in the countryside or on one of the nation's glittering islands; and even in the Stockholm region, the country's most urbanized area, the balance of concrete and green has long been an issue of great contention. When the Green Party emerged on the scene, it was tapping into growing concerns about the environment from residents all over the country, even those in non-urban areas which had historically distanced themselves from the urban-based Social Democratic Party.

In Stockholm, the growth of environmentalism was particularly de-stabilizing for the traditional party system. This was evident as early as 1979, when the locally-based Stockholm Party was founded as a self-identified "urban environmental party" independent of both the right and left party blocs. It emerged partly in protest against the period of mass demolition of culturally and historically important parts of the city center and against the increased dependence on private automobiles in Stockholm. In its first year, the Stockholm Party won no less than three seats on the City Council, filled by three young, fearless and articulate academics from the inner city.³⁴ With its strong environmental stand the Stockholm party quickly became influential, courted from both the left and right party blocs who needed their support to build a coalition government and/or to pass key legislation for the city.

The strength of the environmental movement was partly a consequence of urban development trajectories pursued in Stockholm since the 1960s, itself a function of the consolidation of a county council capable of facilitating urban expansion from the city to the surrounding suburbs. Even with regional cooperation and metropolitan planning officials committed to linking transportation and land use, the city and the region could not avoid the effects of the global oil and industrial crises of the 1970s. The expansive postwar years were over, and it would be another ten years until the population, economy and standard of living had stabilized and could continue to develop. The new County Council's first decision-makers did all they could to meet the financial demands of the existing health care and transit systems, and had little time or resources for regional planning or development. These plans were shelved in wait for better times. When better times finally arrived, there was an established environmental opposition to an automobile-friendly transport system. Transportation planning in Stockholm during the seventies had become primarily focused on traffic calming and reduction, rather than the comprehensive motorway expansion plans of the 1950s and 1960s. So although the ring

³⁴ A leading figure in the creation of the Stockholm party, Agneta Dreber (b.1946), is an economist with degrees in Russian and English who has taken on several leading national and positions besides serving as city council person (1979-1992) and City Commissioner 1988-1991.

roads were arguably somewhat anachronistic by the 1970s and 1980s, at least in Europe, Stockholm's planners found themselves without any viable alternatives to meet the growing pressure of economic and population growth. Housing shortages and traffic congestion were seen as symptoms of Stockholm's growing pains, and by the early 1990s many old transport proposals were dusted off and put back on the investment agenda, including the Western Bypass (then, "yttre tvärleden") and the ring road system, including the already built bridge over Mälaren (*Essingeleden*).

But with environmental consciousness on the rise in Sweden and across Europe, the discussion of these policies was much more fraught in 1990 than it had been in 1960 and 1970. Some of this owed to fundamental changes produced by the advent of the car culture and the failure of prior administrations to plan for such changes. Public transportation demand had grown more quickly than expected: in 1941, the City of Stockholm had only a few thousand automobiles and horse drawn transportation was still used,³⁵ though there was a relatively comprehensive network of streetcars that were successively decommissioned as the subway was built out. Today there are over 300 000 cars registered in the City of Stockholm,³⁶ which brought new demand for enhanced infrastructure, particularly from outlying suburbs (see Appendix 7 for data on automobile ownership in the city and region).³⁷

A Stockholm study delegation of city commissioners and planners in 1956, summarized in the 1960 compendium *Bilstaden* (the automobile city), maintained that growing automobile ownership and use was a sign that social democratic welfare policies were closing socioeconomic gaps. That is, the car's image as environmentally unfriendly would not appear until much later, but when it did, it emerged with significant political ramifications.³⁸ Indeed, population shifts coupled with the destruction of outlying green

³⁵ Horses did not vanish from Stockholm's streets until shortly after the end of World War II.

³⁶ This is nevertheless one for every three inhabitants, far higher than the maximum automobile ownership level of one for every ten people, a figure used in planning studies as a "maximum" for a long period even after the World War II.

³⁷ Although some make the claim that the expansion of the subway system contributed to increased automobile use and the geographic extension of the Stockholm region (Börjesson 2012), when it comes to car usage it seems likely that the expansion was driven by increasing income and the costs of car owning as much as the subway extension. As a consequence of the various driving forces influencing land-use patterns in the metro area, the population of the inner city started falling in the 1940's, later followed by a declining city population in the 1960's. The fraction of Stockholm's population living in the inner city fell from 78 to 35 percent between 1940 and 1980 and the fraction living in the city, decreased from 67 per cent in 1950 to 42 percent in 1980.

³⁸ Not all political leaders and planners agreed with the delegation's recommendations, which included measures to coordinate transport and land-use planning for high quality workplace and residential development, how to balance central and suburban development, and how to work constructively to provide a balance of individual and collective goods while also supporting the general welfare. But by the early 1960s, Sweden had the highest density of cars/capita in Europe. Pressure for the national government to subsidize municipal streets and highways grew, even if public transit was better in Stockholm than the rest of the country.

areas via investments in roadways that serviced car-dependent suburbs served to fundamentally alter the political landscape.

At the national level, growing public skepticism over centralized growth-oriented urban development and accompanying environmental problems, along with a 1980 national referendum over the future of nuclear power, helped catalyzed the founding of the Green Party in 1981 and its broadening traction over the next few decades. After meeting disappointing electoral outcomes in the 1982 and 1985 elections, the Green Party won 20 seats in the Swedish Parliament in the 1988-1991 elections to become the first new party to enter parliament in 70 years, a feat that helps explain their original invitation to the negotiation table by Bengt Dennis. Following momentary lapse at the national level in 1991, the Green Party steadily increased its popularity, securing 18 parliamentary seats the 1994 elections, 16 seats in the 1998 elections, and 17 seats in the 2002 elections. Meanwhile at the local level, the Green Party first secured seats in the Stockholm City Council in 1991 and thereafter remained.

Because Stockholm was the nation's largest city as well as its capital, the growing influence of the Greens and other environmental parties (including the locally-based Stockholm Party) directly impacted both the local and national electoral fate of the Liberal and Conservative Parties, who did not adopt their stringent views on the environment, bringing further problems for the national political party leadership. The strength of environmental activists in Stockholm also created particularly intense conflicts within the Social Democratic Party, bringing to the forefront divisions between the so-called "concrete" and "green" wings, particularly when it came to urban development policy and transport priorities (Interview, Gunnar Söderholm), and between local and national party spokespersons.

It was in this context that Annika Billström found herself on the frontlines of controversy over congesting charging. In the lead-up to the 2002 electoral contest, the Green and Stockholm parties had already been laying the policy groundwork for generating public support from a growing niche in Stockholm's electorate: the environmentally aware urbanite. Reducing dependence on automobiles was one such issue on the table. For many residents within the City of Stockholm, the idea of charging cars coming into the city and contributing to inner city congestion was attractive, not least if revenues could be used to improve public transportation (either directly, or as a result of not having to use as high a share of national transport allocations for roads). As such, the environmental parties sought to decouple congestion charging from the grandiose and highly interdependent transport packages that were moving two steps forward and one step backwards, and instead articulated a position on traffic management that would enhance livability conditions in Stockholm.³⁹

³⁹ To be sure, not all conditions in Stockholm were on the table. Ulrika Franke, Liberal Party member, noted that the issue of parking restrictions in the city was not on the table, despite the fact that doing so would also have helped reduce traffic into the city.

With congestion charging articulated as an item in the campaign, candidates of all parties soon had to take a position. As a Social Democrat running for office in Stockholm, Billström might have calculated that she would be well-served by taking a middle position between the Greens on one hand, and the Liberals and Conservatives on the other. Her options for doing so with respect to transport, however, were limited. She could repudiate congestion charging and use this stance to pull electoral support from those parties to her right; or she could move towards the Greens, and hope that a sufficient portion of the traditional social democratic base would loosen their commitments to “concrete” and embrace the “green” rhetoric. Evidence suggests that deciding between the two options would be a pretty tough call, not just given the Social Democrat’s own ambiguous relationship to environmental issues, but also the fact that what might produce electoral support for the Social Democrats in Stockholm might not do so in national elections, and vice-versa, thus raising potential problems within the party more generally.

Finding a middling strategy on environmental issues was particularly complex for the Social Democrats, as a consequence of environmentalists’ repudiation by Bengt Dennis a decade earlier. This prior mistreatment helped give the Greens a central role in establishing the terms of discussion on a national scale, which ultimately had some bearing on what Social Democrats could do locally. Throughout the campaign, environmental lobbyists had become more organized and were able to highlight the role of road charges in reducing congestion, improving local air quality, reducing carbon emissions, and potentially avoiding the cost and effort to build a western bypass (a highway project intended to serve suburban car owners whose estimated budget increased with every new evaluation and showed no signs of leveling off). Richard Murray, a lifelong activist who also had a background in public administration and city politics, described this period as particularly gratifying. He saw that the environmental awareness that had been increasing since the famous “Battle of the Elms” in Stockholm, where the political decision to chop down 13 elms to make way for an underground station catalyzed public protest and demands for more participatory and sustainable urban planning, was maturing into a tight web of activist groups teaming those most interested with environmental protection with those concerned about preserving a vibrant urban environment. Murray himself served a few umbrella organizations that helped to coordinate a number of smaller groups and considers this strategy to have been particularly valuable in effecting change, not least the congestion charging decision with its dramatic shift in local public opinion from “never” to “maybe” to “yes”.

Complicating matters, there was still considerable support for building new roads as the best way to provide a lasting solution to growing congestion in central parts of the city. This split even parties such as the Social Democrats. When asked to describe the congestion charge decision, Stockholm’s environmental director Gunnar Söderholm notes that:

The Social Democrats underlined the air quality improvement more than congestion [relief], and the Green Party underlined the decrease in congestion more than the air quality. But this is quite logical. To the Social Democrats, this

was not an alternative to new roads but rather a complement. But for the Green Party the main issue was, ‘if we can reduce congestion we can avoid new roads—the present capacity will be enough to handle the traffic.’ They wanted to minimize the number of cars, fossil fuel driven but also the car itself. That was not the case for the Social Democrats—the car has always been a friend to the Social Democrats as symbol of social welfare and economic growth that every man could afford to have a car (they were behind the car friendly policies in the 60s).

Many hoped that building the Western Bypass could reduce the isolation of the rich North and less wealthy Southern parts of the metro region (a long standing priority for the Social Democrats), while also helping working families access jobs, schools and local services. What can be called the “working class,” understood generally to comprise a strong voice in the left bloc’s constituency, was now living throughout the region and gradually spreading further and further out as the processes of gentrification in Stockholm and the near suburbs proceeded. In this partisan context, where the Social Democrats lacked internal unity on environmental priorities, it turned out to be strategically effective for the Stockholm and Green parties to try to compete with the Social Democrats by focusing on a few clear policy goals that could be shared, like a congestion charging trial and more cycling lanes. This would also reduce the competitive uncertainty for the many different political blocs courting partisan support, since the key environmental priorities of these two parties would be clear.

As we know, Annika Billström did prevail despite these complexities, suggesting that support for environmentalism was not so widespread in 2002 as to undermine Social Democratic dominance in Stockholm. Even so, the Stockholm and Green parties held firm to their policy priorities in the post-election period. Some of this owed to the fact that the political milieu remained divisive, thus providing space for the environmental parties to continue promoting their agenda. Much of the original resistance to congestion charging as proposed by the Greens was purely a result of political opposition; in theory, the more conservative parties should have been supportive of free-market economics that would mostly hurt the working class citizens from the suburbs. Further empowering the Greens in their insistence that congestion charging stay on the agenda was the fact that citizen support for politics as usual, built around the consensus model, appeared on the decline. Interviewees repeatedly noted a breakdown in trust among the major parties, despite their having shared a long history of compromise.⁴⁰ In this atmosphere, the antagonism from the parties that had been shut out of the Dennis negotiations (Center, Left and Green) remained palpable. In a strategy that some could say stung of revenge, these parties closed ranks—not just because of the humiliation of their expulsion, but also because with issues of mistrust on the table they no longer felt strong loyalty to the dominant parties, including the Social Democrats, who in prior periods had worked across partisan lines to forge compromises in order to keep the consensus political culture

⁴⁰ Some observers argued that Göran Persson’s support for congestion charging in 2002 took the Liberal and Center parties completely by surprise, primarily because it signalled a break from the party’s longstanding commitment to forging compromise among themselves.

alive. The combination of these factors motivated the Stockholm Party and the Greens, under the leadership of spokespersons like Agneta Dreber and Asa Romson, to remain strongly committed to the cause of congestion charging, putting pressure on the newly elected Mayor Annika Billström to address their concerns.

From Controversy to Congratulations: Annika Billström (2002-2006)

Annika Billström was appointed mayor in 2002 by the Stockholm City Council, after winning the municipal election and forming a majority with the Left Party and the Green Party. Stockholm's first female mayor, Billström was a former Commissioner for Streets and Real Estate, and in 2002 held the position of Finance Commissioner concurrent with her mayorship. Her prior positions meant that she clearly was knowledgeable of the complex technical, financial, and political conditions that would need to be addressed if she were to move forward on congestion charging. This partly explains her opposition during the election campaign of 2002, where she stated that she would not introduce congestion charges during the next term if elected. However, changes in the policy priorities of the Social Democratic party at the national level forced a rethinking of these plans. Conventional wisdom was that Billström was more or less ordered to introduce a full scale charging experiment by her national government party colleague, the new Prime Minister Göran Persson.⁴¹ And although different opinions have been offered as to what role the Green Party played in forcing the Social Democrats to install congestion charging (one informant even called it “blackmailing”), a widely shared view is that the Green Party representatives made it clear to the Prime Minister Göran Persson that their support of his national coalition was conditional on a promise to test a full scale congestion charging scheme in Stockholm, including evaluation of the potential for a permanent charge during the next mandate period. Anna Wersäll, spokeswoman for the Stockholm Chamber of Commerce, offers the following perspective: national interests once again prevailed; the national wing of the party was willing to sacrifice their party comrades at the local level.

To be sure, the picture may not have been as Machiavellian as is suggested by this singular interpretation. Billström, like Persson, was governing in coalition with parties that had strongly supported congestion pricing, and thus she now had political reasons for moving forward on the policy. The 2002 elections strengthened the position of the Social

⁴¹ Although finding irrefutable evidence of this is not possible, this interpretation was advanced by all our interviewees, with the exception of one environmental activist, who suggested that Billström had made a “mistake” in a public interview on the campaign trail, and that she was a strong supporter of congestion charging all along.

Democrats and the Liberals, both nationally and in the capital city region. The Social Democrats were the largest party in the parliament and were eager to hold onto power, but this required the active support of the Greens, who, with their 17 seats, were now clearly in possession of swing vote power. According to one of our interviewees, in fact, moving forward on congestion charging was the only way for her to form a majority in the city council and become Finance Commissioner (Bosse Ringholm, interview). In an interview for this study, she herself claimed that she had wanted to wait to offer a full-scale trial, and that she had always intended to explore the issue seriously once in office, a position echoed by others (see footnote #12). More precisely, she had hoped to use the first mandate period to investigate the issue of congestion charges more fully, and then consider an introduction after 2006. But whatever her personal proclivities, upon assuming the mayorship, it became clear that waiting would not be a wise move.

This was hardly a cost-free maneuver, and it put Billström in the difficult position of being seen as a follower more than a leader. Most written documents about her “change of mind” suggest that the Prime Minister forced her to this. Likewise, Billström faced a storm of criticism after the election for having broken her promise and many assumed that her ability to govern the city would be compromised.⁴² That this did not occur may be the clearest testament to her formidable leadership capacity. Indeed, Billström turned this liability into an opportunity, using widening support for congestion charging (as indicated by the growing electoral influence of environmental parties) along with the Greens’ pivotal role in parliament to pressure the national government to supply co-funding for a trial, thus finding a way to increase her fiscal room for maneuver. She also demanded that a secretariat for the “environmental charge” (*Miljöavgiftskansli*) be created directly under her, in order to more expertly manage the trial. Political timing and the “very special” political context (according to Gunnar Söderholm) heavily influenced the national government’s willingness to comply with these requests. Both these demands made it more likely that the trial would be well-managed, which itself was critical to the longer-term success of the initiative. Given that the trial was intended to pave the way for a referendum, if problems emerged during the initial stage the political moment might be lost to expand public support and thus institutionalize congestion pricing.

That other political parties were sharing the driver’s seat in advancing the policy also was reflected in issues related to the timing and nature of the trial. Green Party advocates felt that they would be seen as most principled if they demanded a congestion charging trial that was full scale in geographic terms but limited in temporal terms, to be followed by a public referendum as soon as possible. These details were highly significant to the long-term success of the policy. Former Green Party spokesperson Åsa Romson noted that a one-year full-scale trial was a necessity if the public were to be convinced of the policy’s merits. The proposed congestion tax would not only affect Stockholmers, but also a large share of commuters from surrounding municipalities. Decision-makers in government (*regeringen*) and parliament (*riksdagen*), the Stockholm County Council

⁴² After her party lost the control of the city council in 2006, Annika Billström left politics for good.

(*landstingsfullmäktige*) and the Stockholm City Council (*Stockholms kommunfullmäktige*) were subject to strong pressure from the media and other opinion leaders—for and against—and several parties were in disagreement with each other. Professional experts called into the discussion by Billström also felt that the trial would need to show itself capable of coordinating transport and land-use planning for high quality workplace and residential development, it would have to balance central city and suburban development, it should be capable of providing both individual and collective goods, it would need to be perceived as providing general welfare. Such concerns were established early on, in fact, thus explaining why Billström rejected a last minute proposal to limit the trial to only a few parts of the city.

The condition that the trial be full-scale—comprising (almost) all access roads to Stockholm but with a strictly defined trial period—is noted by many of those interviewed as critical to its eventual success. It should also be noted that the expense to launch this “full scale experiment” was over 1.9 billion SEK (mostly for infrastructure and IT systems to make automatic and time differentiated charging feasible), a considerable investment for a trial that was promised to scrap if the Stockholm referendum was not positive. But this was where the agreement made between Billström and Persson paid off. “The (national) government had to pay dearly, and only Stockholm got the benefits,” said Magnus Nilsson. Articulated more explicitly by Gunnar Söderholm:

It was early also very clear that the national government would pay for the whole trial—1.9 billion SEK (USD \$233.5 million). That is also, to me, a very obvious proof that the national government felt responsible for the trial in Stockholm. That was a result of the agreement on the national government between the Greens and Social Democrats.

The 2002 elections had also given the Greens swing vote power within the Stockholm City Council and the County Council. This made local approval of a congestion charging trial essentially unavoidable, even for the most avid opponents (although with plenty of red tape). In response, opponents focused on delay tactics, including legal appeals of the many details as part of the decision. This proved effective insofar as the idea of the trial was delayed several times as courts combed through each paragraph of the decisions. In the end, these legal challenges prevented the technical team from moving forward as rapidly as they wanted, thus turning the experiment into a seven-month trial instead of a several year trial. Much of the legal controversy had to do with whether or not it was possible to introduce a local fee, which would require a change to the Swedish Constitution.⁴³ Each passage through the cordon is legally a tax transaction, meaning that failure to pay the (automatically charged) tax in time induced heavy fees and left the user with a record of tax evasion.⁴⁴ As such, before moving forward on the trial, logistical and legal issues related to how funds were to be collected became a critical point of contention.

⁴³ Such a change was made seven year later.

⁴⁴ Note that taxis and other commercial vehicles were exempt from the tax as were alternatively fuelled vehicles—a selling point for green cars that had such dramatic effect on sales of ethanol bi-fuelled vehicles in particular that it has since been revoked to ensure that revenues can remain high and congestion low.

Tax or fee? Locally or nationally determined and administered? Who pays, and to whom would the revenues accrue? How would they be used?

Lingering public opposition rooted in partisan politics also contextualized this discussion. A review of newspaper articles from the period, personal accounts and interviews suggests that the idea of some form of congestion charges had broad appeal but that the differences in opinion regarding its form, function and timing remained unresolved from the Dennis negotiation period. The box below, a translation from a short article in the daily newspaper Svenska Dagbladet only days after the 2002 election underscores the ways that congestion charging was perceived as linked to larger political objectives:⁴⁵

Congestion charges can pave the way for right bloc governance (*Trängselavgifter kan bana väg för borgerligt styre*) :

Congestion charges are hard currency in the attempt to build a new government in Stockholm. Even the Moderates and Liberals are now discussing a congestion charging trial with the Greens.... Yesterday, the Green Party discussed the possible building of a coalition with the Social Democrats and the Left Party for three hours... A next discussion is scheduled for Thursday. But before then, the Greens are scheduled to meet with the right bloc troika: m, fp and kd* for a second common session today. Congestion charging is expected to be one of the hottest issues. The Moderates and Liberals are bone-hard opponents to tolls but have nevertheless kept the door open for a discussion; "We are generally against congestion charges within our party... congestion charges are something that the voters ought to be able to weigh in on in 2006. However, we are discussing possibilities for a voluntary experiment with congestion charges with the Green Party. But we haven't yet formed an official decision on the issue within the party," says Moderate Party leader Kristina Axén Olin. According to the Green Party, both sides have shown similar openness to the discussion of congestion charges. The fact that the major parties have promised that the voters can decide the issue in 2006** is no hinder, according to Green Party spokesman Åsa Romson. – "We want to get going with congestion charges quickly to show what effect they can have on the environment and on this horrible congestion. Then we can of course demolish the system after the next election."

*m=moderates, fp=liberals/folkpartiet, kd=Christian democrats. The leaders cited in this article are all Stockholm city politicians, not national parliament or county representatives

**Romson is referring to the (not formally binding) promise to hold a referendum on congestion charges in 2006 and abide by the voters' decision.

Source, Cecilia Axelsson, Svenska Dagbladet 24 September 2002 (author's translation)

Once this legal nomenclature was clarified, however, the trial preparations were finally underway. Technical experts worked day and night to streamline and test a wide range of technical equipment (including surveillance monitors) and computer algorithms to insure that the trial would go smoothly. Billström had incorporated some of the country's top planning professionals, and no amount of money or care was sacrificed in developing a robust system for monitoring traffic, including the preparation of back-up plans in case

⁴⁵ The Green Party eventually cooperated with the Social Democrats and Left.

of system failure. Some of Sweden's top IT firms (such as Ericsson) and several global industry leaders were brought into the project early on, and with IBM winning the major contract for monitoring traffic, local authorities were positioned to deploy the best quality technology for surveillance. Such decisions also opened a window for future support of congestion charging from leading Swedish technology firms, many of whom did not have a history of partisan political support for environmental issues, let alone for the left-leaning coalition of parties integrated into Billström's cabinet. The largest technology contract went to the multinational firm IBM, which had the reputation and technical expertise to accommodate such a major undertaking within an increasingly narrowing time frame. Paradoxically, this move motivated local technology firms to fight their exclusion from the bidding process in court,⁴⁶ contributing to more legal challenges that further delayed the start of the trial.

As a consequence, the heat was on to insure that once the seven-month period for the trial would start, there would be absolutely no technical glitches. Paradoxically, such pressures ended up forcing a high degree of coordination between politicians in Billström's cabinet and a wide range of technical professionals in the public and private sector, to great effect. For instance, the Executive Office of Stockholm enlisted Transek, a private transport and logistics consultancy, to develop a technical proposal for a system including transponders, which would enable automatic congestion charging (unlike the Norwegian system) and time-variable "tax on demand" via registration of passing vehicles (not merely video checking as in London). Additionally the Stockholm Traffic Office worked with the Congestion Charging Secretariat, a group of leading transport researchers charged with studying the effects of the trial and issuing monthly status reports, to make sure that data gathering and evaluation systems were in place. With a wide range of actors invested in the technical success of the trial, it unfolded without any major flaws, partly explaining why despite its truncation to just seven months, it was considered to be a highly successful trial.

As Gunnar Söderholm put it, "What convinced people was that it worked technically. They trusted the system. They discovered that it was not the end of the world."

With the traffic monitoring system working smoothly, the chaos predicted by congestion charging opponents did not materialize. On its first day, the traffic volumes on the gateways to the city decreased by 20-25 percent and congestion was markedly reduced.⁴⁷ Over the seven-month trial period, traffic volumes decreased by around 22 percent, and upon reintroduction of congestion charging as a permanent policy in August 2007, decreases in traffic volumes remained relatively constant at around 22 percent (Eliason 2014). Further, feared effects of increased congestion problems on other links and circumferential roads as well as induced demand remained unsubstantiated.

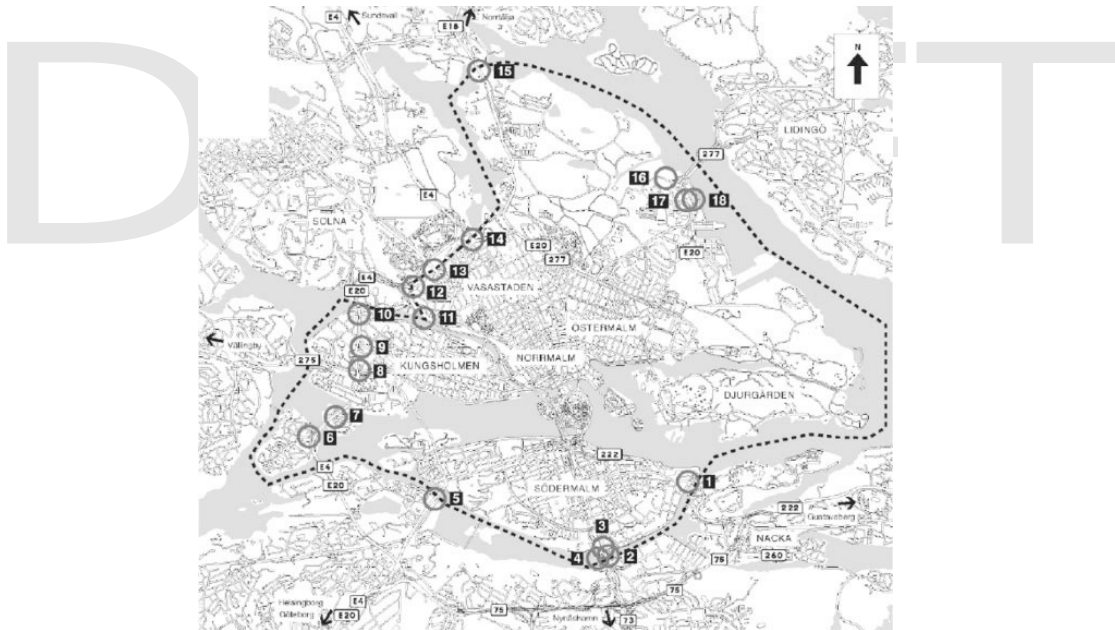
⁴⁶ Although all of the bids were evaluated in conjunction with the National Road Administration, there were allegations that the contracts were adopted illegally. With several Swedish firms upset that contracts were given to IBM, political opposition intensified. Disgruntled forces upset about the contracting process took the city of Stockholm to court, a situation which further delayed the trial.

⁴⁷ (Borjesson et al. 2012)

Stockholm Before and After the Congestion Trial



The years of planning paid off, emboldening supporters of congestion charging to claim a certain degree of success.



The congestion charge zone and electronic payment gateways.

Many gateways have several hundred years of history as tolled entry points for goods into the city. It is also no accident that all of the actual charging points (including the physical infrastructure itself) are on Stockholm City land. To site gateways in other municipalities would have required negotiating land use rights with additional communities and it was feared that surrounding municipalities could use land use monopoly power to block the trial. Sources: Vägverket 2005; Hårsman and Quigley 2010

Beyond the technical successes of the trial, the use of a referendum to move from a mandated large-scale experiment to potentially permanent national tax was also a

strategic decision that bore fruit.⁴⁸ Residents could in theory vote in favor of the Social Democrats and against the congestion charge, thus undermining the opposition's claims that the Billström administration was imposing a policy that the public rejected. Indeed, in City Hall, the Moderates and Liberals had been opposed to the tax and had hoped to generate popular support against road charges in any form. Organizations with the strongest opposition to the congestion tax included the Stockholm Chamber of Commerce and the Automobile Association, Motormännen. Just prior to the 2002 election, in fact, the Chamber published poll results showing that 60 percent of the Stockholmers were against the tax, and Motormännen gathered 32,000 signatures demanding that the referendum in September 2003 regarding whether or not Sweden should join the European Monetary Union would also poll public opinion regarding the congestion charges.

Given this well-orchestrated opposition, and the delays caused by lawsuits early in her term, Annika Billström was careful to plan the timing of the referendum so as to maximize the potential for success while also minimizing political damage to herself and the coalition parties. With support from others in the city council, including Green Party representatives, she decided that the referendum would not be held until Stockholmers—as well as politicians and technical experts—had the benefit of experiencing a full-scale experiment. For this reason, the referendum was held simultaneously with the general election in 2006. Upon doing so, Billström promised that notwithstanding the fact that the referendum was formally still only advisory, the city would respect the decision of the electorate within the city borders.

Her judgement about the timing and scale of the referendum proved important in several respects, and provide a clue to aspects of her leadership in Stockholm. Agreeing to respect the results of a referendum was political risk. Remember that public opinion polls at the time were clearly against the charge.⁴⁹ Nevertheless, Billström calculated that agreeing to a referendum might help dampen the powerful criticism she was subject to from other parties, from the press, and even from some of her own constituency. She had been compelled to break a promise to wait with a full scale test—but since the test was being pushed through anyway by the national government, she seemed well within her rights to demand that a referendum be held once the voters had a clear sense of how it affected them, both positively and negatively. It also gave transportation planners and administrators time to focus on the immediate improvements that could be made in other areas, including a significant expansion of bus service and new subway cars, all of which showed that voters were “getting something” from the charge—even if this was, strictly

⁴⁸Referenda have always been advisory, i.e. non-binding in Sweden. If a minimum of 5% of eligible voters demand a referendum local governments are compelled to administer a referendum.

⁴⁹ Polls taken when the congestion charge trial had been announced, but was not yet underway, showed 52% percent in favor in late 2004, but only 43% by late 2005. However, towards the end of the trial public support had increased to 54%, a remarkable shift that underscores the importance of helping users experience actual effects of such a policy. (Hårsman and Quigley; see also Final Report of the Stockholm Trial (Söderholm).

speaking, not the case.⁵⁰ In short, promising to hold a referendum was relatively unproblematic, while promising to follow its result was risky but could effectively counteract arguments that she was unresponsive to her constituency.

Even so, Billström's opponents were not easily assuaged. It was not enough that the mayor and her supporters had agreed to a referendum. Now they turned their attention to the details. Would only residents of the municipality of Stockholm vote? How would the question be presented on the ballot? Several surrounding municipalities where the right bloc was in power decided that they would also hold local referenda on the congestion charging issue, using of their own formulation of the question (interview, Magnus Carle). In the end, fourteen municipalities plus Stockholm held a referendum; eleven did not. Political leaders in the fourteen outlying municipalities, the Chamber of Commerce and Motormännen, as well as opposing politicians in the Stockholm City Council all demanded that their votes be given the same weight as those of Stockholmers, a premise that was vigorously and successfully opposed by the city hall leadership. Results from surrounding communities would be considered, but only the results of the referendum held in the municipality of Stockholm would count. Results from surrounding communities would be considered, but not allowed to determine what the City of Stockholm would propose to the national government and parliament to make the charge permanent.

The gamble paid off. To the surprise of many, the referendum in Stockholm showed a clear majority in favor of continued congestion taxes, with public support strongest in the inner city. Again, part of the enthusiasm owed to the great skill with which the trial was executed, unfolding without problems—even to the surprise of the technical team responsible for its implementation (Interview, Gunner Söderholm).⁵¹ And although the referenda in those surrounding communities that held a vote had a clear majority against, this did not tarnish the successes in the city, particularly among the commercial sector and business leaders who had opposed the policy because of a fear that disruption would harm business interests, finding out otherwise. Even those automobile drivers who may have decried the idea of paying for access to the city found that with congestion charging truly reducing traffic delays, their commutes were easier, something that many were willing to pay for (Interview, Magnus Nilsson).

What Annika Billström achieved with this referendum, in short, was extraordinary, particularly given the strong-armed publicity tactics of the opposition, and given the less than ideal circumstances in which as mayor she became the standard bearer for a policy

⁵⁰ This was perhaps a lesson learned from Oslo, which began to collect its toll on the same day that the city and county—with pomp and circumstance—celebrated the opening of the new tunnel under the inner city.

⁵¹ For a remarkably thorough and highly detailed accounting of the congestion charging saga, and the types of technical preparations and political calculations made by planning professionals leading up to and during the congestion trial, see the 2009 book *Congestion Taxes in City Traffic: Lessons learnt from the Stockholm Trial*, edited by Anders Gullberg and Karolina Isaksson, which looks at length at the congestion charging controversy in Stockholm. Other sources include a wide range of articles by Jonas Eliasson, perhaps Sweden's foremost expert on congestion charging, listed in the references.

that she had repudiated during her campaign. That Billström excelled in how she advanced public support for congestion charging policy is a testament to her will and capacity as mayor. One might speculate that because her reputation was at stake, she was even more driven to work through organizational and political hurdles towards a solution. Yet she also knew that her coalition government needed to make good on its promises, and do so with strong public accolades, or any future support from the Greens and other parties of the left would be impossible. Whatever the motivation, Billström's capacity to generate relatively widespread support for congestion charging was no easy task. Even without the baggage of her "broken promise," upon coming to office she had faced a near impossible political situation: no consensus, no financing, political embarrassment, and an emerging influence of the Green Party that framed the problem of road charging from an environmental perspective. Her own perseverance through conflict produced indisputable gains: if not consensus, then a workable agreement showing both citizens and the political elite that congestion charging was not the disaster its opponents had predicted. Central to this outcome was her capacity to manage a team of technical experts while also bringing key business supporters on board with the project.

Cumulative Political Leadership? From Referendum to Permanent Policy

We must remember, however, that even with majority support for the referendum from residents of Stockholm, and growing interest in congestion charging policy as both a revenue source and a boost to the IT industry, there remained strong opposition from the public in outlying municipalities. And because the referendum was consultative and not legally binding, any action moving forward would require the next administration to act. Paradoxically, this meant that another party would have to take up the mantle. Billström's Social Democratic Party was defeated in the 2006 election, despite the successes with the congestion charge referendum. Electoral representation in Stockholm's City Council moved to the center in 2006, an election which in fact put the right bloc back in power at multiple levels: in parliament, the county council, and in Stockholm. Although the left bloc had won the referendum regarding congestion charging, it lost its seats at all levels of government. This was an indication that as a single issue, congestion charging would not necessarily affect the power balance between the two blocs in general elections, and that it did not have to be seen as a partisan issue.⁵² Thus, far from ending the prospects of

⁵² As suggested by Hårsman and Quigley (2010) the causation goes in two directions: those with strong opinions about congestion charging might have voted for a party sharing their opinion and those having strong preferences for a political party may have disregarded their opinion about the charging system.

congestion charging, the issue was able to remain on the table as a potential policy of common interest, rather than as a source of partisan conflict.

Even so, because the right bloc won enough of a majority that the Green Party no longer held swing vote authority, the policy's strongest advocates would have to be those from the center bloc and their allies, many of whom had been Billström's most vocal opponents. In this context, the fate of congestion charging in 2006 was hardly assured. There remained deep divisions within various political parties at the city and county levels, thus making it hard to generate intra-party consensus about this single issue, despite the potential for cross-party compromise. Interviews (e.g. Bo Malmsten, Klas Thorén, and Bosse Ringholm) indicate that the Social Democrats at the city level were positive about congestion charges but fairly strongly opposed in Stockholm's near suburbs, and even more so in the other municipalities in the region. Some of this had to do with actual uncertainty regarding effects, including some unrelated to traffic. Would it dampen economic growth or promote it? Would it hurt less wealthy Stockholmers or benefit them? Would it diminish total congestion or just relocate it? Would benefits and costs accrue mostly to the inner city, suburbs or region?

Further muddying the waters, there was a great degree of uncertainty having to do with signals between the local and national levels.⁵³ Would an acceptance of congestion charges free up additional resources for Stockholm's road infrastructure, or give the national government an excuse to reduce the annual transportation subsidy—essentially using the congestion charging revenues for other national priorities? Interviews, as well as reviews of public statements during the 2002-2007 period indicate that many political leaders were attempting to both calm their base constituencies (that may or may not want the tax, or may or may not want revenues from the tax to facilitate the approval of new motorways) but also leave the door open for compromises with other parties and other political levels. As noted earlier, according to the Swedish Constitution, a congestion charge is a national tax over which the parliament has decision-making authority and indeed, does not have the legal authority to delegate to the government or to a

⁵³ Historically, the tensions between urban and national goals have been politically significant, driving compromises and conflicts among different parties, many of which have revolved around transportation issues. For example, with the 1963 Transport Act, Statens Järnvägar (SJ), the Swedish State Railways, had to bear the full costs of any of its transport modes nationally therefore reducing investments in Stockholm's transportation services, this policy caused people, politicians and the press to object strongly (Lundberg 1996). In response, Stockholm Mayor Hjalmar Mehr took the opportunity to demand that the national government appoint a national coordination and negotiation representative with the goal of creating a unified transit system and associated national investment support that did not disfavor the Stockholm subway and the suburban lines. This was just one example of the ways that local and national authorities have sought to reduce local-national infrastructure and investment tensions by convening negotiating bodies to hammer out a compromise. In this earlier instance, the City of Stockholm took a leadership role in determining the future of the entire metro region, whereas with the Dennis agreement in 1991 the discussion was nationally-led.

municipality.⁵⁴ Revenues and costs for and from the scheme must be managed by the national level, as are decisions regarding the use of the revenues. This means that strictly speaking, the Stockholm region could make no special claims on the revenues from the congestion charge. As Magnus Carle, former head of the Office of Regional Planning and Urban Transportation for Stockholm County, put it in an interview in June 2015, “We don’t have any earmarked taxes in Sweden. Everything is going into a black hole and from there you pick it up.”

What ultimately moved the debate forward, then, was the common understanding of congestion charge revenues as holding the key to financing future transportation improvements in Stockholm, a position that produced ground for compromise among the different political parties. That institutionalizing congestion charging would be a way of guaranteeing future gains for the city, was also affirmed in public statements from national government politicians noting the tax as an important national contribution to Stockholm’s transportation infrastructure. And once congestion charging was understood as a basis of revenue generation, even its right bloc opponents began to rethink their initial position against the policy.

The City Council’s new majority leadership, led by Moderate Sten Nordin as the new Finance Commissioner, was now faced with a tricky situation, described by party colleague Carl Cederschiöld this way:

The voters gave the right bloc a clear majority and the moderates and liberals (Folkpartiet) were clearly against the congestion tax, but got control of the city hall—while at the same time they voted 54% for the congestion charge and 80% of the people that had been given the opportunity to vote in surrounding communities were against. Also within the Alliance (Moderates, Liberals, Christian Democrats, Center) we had a split, the Center Party wanted the tax. We needed to unravel that knot, so we came up with a clever solution. We four parties wrote a guest editorial in DN (DagensNyheter, Stockholm’s largest daily newspaper) about a week before we were scheduled to assume governance of the city and we wrote, “Yes, there will be a permanent congestion tax from July 1, 2007.” We had to do it before we assumed power, we had to pre-empt the discussion before it completely got out of hand.

The text to which Cederschiöld is referring was published October 1, 2006 and was an extremely important strategic move for the so-called Alliance, one that is notable for several reasons. First of all, even though Cederschiöld refers to “we,” it is important to underscore that the editorial was signed by the leaders of all four alliance parties at the national level: incoming prime minister Fredrik Reinfeldt, (M), Maud Olofsson (Center), Lars Leijonborg (Folkpartiet) and Göran Hägglund (Christian Democrat.) This was an example of the importance of keeping ongoing communication among party members at the local, regional and national levels if the right bloc in Stockholm wanted to move

⁵⁴ Or at least this was the debate in 2006. This paragraph of the Constitution has since been modified. Since 2011, the Swedish parliament may delegate such decisions to the government or to a municipality but it is stated that such a delegation right should be used restrictively.

forward on congestion charging.⁵⁵ Second and perhaps even more important, in order to justify their about-face the alliance parties re-coupled the congestion charging issue back into the decisions regarding other major transportation investments, including those that served automobile constituents, much in the same way as the policy was first proposed in the Dennis Package. Witness the leading text: “The leaders for the Alliance present a major transportation policy package with congestion taxes in Stockholm. The new government will appoint a special negotiator whose responsibility will be to implement this comprehensive transportation solution.”⁵⁶

With one stroke congestion taxes were reframed and positioned as a funding mechanism for new roads,⁵⁷ the solution with which the right bloc (and the Moderates in particular) had been most comfortable with since Dennis. The focus would once again be completing the ring and the Western Bypass, in part because the latter was seen as being key for uniting the region and for economic growth (interview, Magnus Carle). Its environmental aspects were far less important.⁵⁸ Also on the table was the possibility of broad political approval across political blocs in the parliament, county council, and municipalities behind the idea to explicitly link extensions of the subway to new housing developments in station areas so as to serve more municipalities.⁵⁹ Yet most important, in this critical moment, the Alliance thought that yet another national negotiator would be needed to insure that in this new political environment, an agreement connecting congestion charging revenues to transportation infrastructure investments would in fact be durable.

The man chosen for this position in 2006 was former Stockholm Mayor Carl Cederschiöld, an experienced Moderate Party politician who had preceded Billström in her post in Stockholm. In a very similar procedure used twenty-five years earlier to select Bengt Dennis, the national government (now under Moderate Party leadership) asked Cederschiöld to negotiate a transportation package that included representatives from surrounding municipalities. Called the Stockholm Negotiations, the discussion was intended to generate consensus on which projects should be prioritized in the Stockholm region. In taking on this post, many of the lessons learned from Dennis’s failures did not fall on deaf ears.

⁵⁵ As of yet this has not transpired.

⁵⁶ Original text in Swedish can be found at: <http://www.dn.se/debatt/vi-sager-ja-till-trangselskatten-for-att-finansiera-kringsfartsleder/>

⁵⁷ In fact, congestion charging revenues would also finance rail investments.

⁵⁸ There is some evidence to suggest that Swedes hold environmental issues as a given, but that, because air pollution is not an issue in Stockholm, the environmental goals have not always been as clear. Finances, however, have always been an issue to negotiate, no matter which party is in power, as demonstrated first by Bengt Dennis’s commission under the Social Democrats and later by Carl Cederschiöld under the Moderates.

⁵⁹ Many saw this proposal as essentially a reaffirmation of the principles of the 1952 City Plan and the regional plans that followed it. Even the routes of the proposed subway extensions are essentially inspired from proposals and arguments in the 1965 Subway plan, which were not implemented.

Cederschiöld described his role during the Stockholm Negotiations of 2007 in very different terms than had Dennis, perhaps explaining his success in comparison. In an interview June 2015 he said, “My mandate was pretty open: reach an agreement. Reach a consensus about what should be done in the Stockholm region.” He saw the main issues at stake as the relations between the Social Democrats and the Green Party at the national level in the wake of the electoral defeat, internal relations/divisions within the Social Democrats, and evermore pressing needs of the city, with traffic reaching an all-time peak. In contrast, Dennis had pursued “negotiation” under strictly defined objectives, and he found it easier to negotiate with the large parties on either end of the political spectrum than the small parties, several of which were not on the fringe but actually in the political center. His strategy was to produce a well-defined package that could win over the largest parties with a balance of road and public transport investments, in which road charges became a supplementary part of the package.

Cederschiöld, for his part, was coming to negotiations with much more widespread support for congestion charging, and perhaps less consensus about the needed balance of road and public transportation, in part because of the changed demographic and spatial environment. He also was approaching the negotiations with the expectation that infrastructure priorities made possible from congestion charging would be determined locally, not nationally. Dennis, in contrast, was working to persuade the national government to agree to a higher national subsidy as part of the agreement (something it had explicitly opposed when appointing Dennis). Therefore, Dennis courted national subsidies with the idea that they would be leveraged with local funds that would together be large enough to make a real difference:

The construction of the charging system was admittedly not the best—all the partners were aware of that—but the charges had, despite their faults, an incredibly central role. They would have given financial stability to the project and would have had a steering effect on the traffic. The critics of the whole package ‘sold the butter and lost the money’. They got what they didn’t want, the motorways, and lost the road charges that would have provided environmental improvements. Talk about amateurs in Swedish politics! They should have supported the package but tried to find another form for the charging system.

Given that there was no over-arching national infrastructure plan on the table, and that municipalities with different infrastructure needs would be thrown together in a single negotiation, finding agreement was expected to be extremely difficult. This was not merely because municipalities had different infrastructural priorities for which they sought to use congestion charge funds, but also because they would have to be responsible to their political constituencies if they traded off local priorities in the process of compromise. Thus Cederschiöld emphasized the importance of closed negotiations as a means for finding solutions through uninhibited dialogue:

If you want to have results you want to have closed negotiations. Open negotiations are worthless... When I was appointed, the debate immediately focused on this, in the media and science world. But the real negotiations have to be closed. Otherwise they get out of hand, you lose control. You must be able to

test ideas without that being public, without people saying, ‘Oh, they’re going to test this.’ No, we have to think. We had seminars and debates during the process in order to test what people thought. But the negotiations had to be closed.

With this strategy, Cederschiöld was not only able to find agreement on a series of planned transportation investments for various municipalities. Even more important for our purposes, he helped cement wider regional support for the idea congestion charging, since the fiscal capacity to fund the infrastructure priorities of outlying municipalities was framed as contingent on the availability of revenues that could be generated from contesting charging. As put by Torbjörn Sunesson, Acting Director General at the Swedish Transport Administration (Trafikverket), “Congestion charging opened the eyes for the possibilities in negotiation. It was a kind of grease in the system. When you came up with this money it was kind of, ‘Here’s some money. What do we do with that?’ Money is always a way to get people working.” With outlying municipalities bought into the idea of congestion charging, the final obstacle to institutionalizing it as permanent policy was removed. The Moderate Party leadership in Stockholm and at the national level (under Moderate Party leader and Prime Minister Fredrik Reinfeldt) moved quickly to push through parliamentary support for making congestion charging national policy. With its former political opponents now embracing congestion charging, alongside the Greens and the Social Democrats, its fate was sealed.

To be sure, Cederschiöld credits some of the success of the 2007 negotiations to changed conditions, and the fact that most politicians – and not merely technocratic civil servants – had “realized that regional growth was too rapid *not* to come to an agreement.” With the “most insurmountable of transport hurdles” like congestion charging being passed after so many decades of controversy, other agreements were able to come much more swiftly. In Cederschiöld’s words:

When I was out debating this around the region, I was always saying “Forget the old Stockholm. We’re talking about infrastructure investments for a region of 3 million people...” It wasn’t difficult to make this argument because people saw it all around them. Congestion on the roads, companies complaining about employees not being able to get to job all the time. Either the commuter trains were late or they were sitting in cues....

In his view, since the 1990s there has been a growing acceptance that Stockholm *should* grow, that regional growth is crucial to the development of Sweden, and that this would mean investing in transportation (personal interview, June 2015).

Back to the Future?

With so many different actors now on the same page with respect to the importance of building new transport infrastructure to enable prosperity and livability in the city and region, and with congestion charges having been proven to be an efficient and workable measure for such revenue generation, Cederschiöld's job was much easier than that of his predecessor's. But it was also much more long-lasting.

In contrast with the Dennis (Agreement), the Stockholm Agreement seems to have a long life. It's being done, piece-by-piece. It also facilitates cooperation between different bodies, because they have the same map in front of them. In that sense, I think the Stockholm Agreement has helped to change the way we treat infrastructure issues in the region (interview, Carl Cederschiöld).

When Bengt Dennis presented the so-called first Stockholm Agreement (i.e. the Dennis Package) to the Minister of Communication, he had negotiated a deal with the national transport authorities (the current Transport Administration) to construct the transport links and finance these investments through a new company with loans that would, by and large, be repaid by road charging revenues. In the Stockholm region today, by contrast, congestion charging has evolved into almost entirely a financing system, presumably permanent, in which revenues accrue back to public authorities for targeted infrastructure investments. In the first years of operation, annual toll revenues totaled over SEK 800 million (over USD \$98 million), increasing to SEK 850 million (USD \$104.5 million) in 2013. Roughly half of individual payments come from Stockholmers and the other half, from the rest of the region. Beyond "recouping" the total cost for the congestion charging system, the investment has yielded a net social surplus, primarily from savings in travel time and reduced travel time variability and secondarily from environmental, health, and public safety benefits.⁶⁰ Indeed, since 2007, the financing of subway extensions have been to a large extent made by increasing and widening the current charges.⁶¹

Since the success of the Stockholm Negotiations of 2007, similar political tactics have been used to bring potentially conflictive stakeholders together: represented by the Stockholm Negotiations of 2013 (which focused primarily on subway expansion) and the Sweden Negotiations (which focus on the high-speed rail link and housing, especially). Both the 2013 Negotiations and the Sweden Negotiations have brought municipalities one step at a time into infrastructure planning in a way that decentralizes and democratizes regional planning to a degree – but while also reinforcing the relationships between civil servants in the planning bureaucracy and political parties at the municipal

⁶⁰ The net social surplus is estimated at over SEK 700 million (USD \$85 million) per year. The total public financial surplus is SEK 611 million per year, of which SEK 542 million is net revenues from the charges and SEK 184 million is increased revenues from public transport fares. On the other hand, the yearly cost of the congestion charging system is SEK 220 million, while the entire initial cost for the system is budgeted at approximately SEK 1.9 billion. Hence in socioeconomic terms, the investment is "recovered" in a little more than 4 years (Eliasson 2009).

⁶¹ State contributions to the subway expansion is contingent on the local authorities in question agreeing to expand housing, which often entails a shift from previous positions against public housing and emerges in response to population growth pressures.

level. At the start of the negotiations of 2013 there was a regional urban development plan for the surrounding municipalities, and in recent years more power and investments (i.e. subway stations) have been given to those municipalities that have agreed to make the largest investments in return (i.e. housing units). The Sweden Negotiations were largely inspired by what happened after the successful 2007 Stockholm agreements, but with even more focus on the idea of land value and land capturing, a tactic lauded by Göran Cars. Other major projects recently pursued in Stockholm, such as a subway to Nacka, were largely agreed upon because the constituents are more similar in their aims than the varied stakeholders in the Sweden Negotiations. As such, at the time of this writing it remains to be seen which other major investments can be agreed upon in the Sweden Negotiations, and whether the previous agreements in the Stockholm region will serve as adequate precedents for larger-scale discussions. But one thing is clear: with these new strategies of financing there is a much closer connection between transportation and land-use, with greater opportunities to leverage urban development priorities in housing through the finance of transport infrastructure, and vice-versa.

Indeed, while the contents of Stockholm's current projects may appear similar to that of the original Dennis Package, there are some major institutional differences that have led to a more sustainable growth model moving forward:

- The heads of local governments were brought to the table with the assumption that their constituencies (or municipalities) would accept their decisions.
- In the Stockholm Negotiations, the overall goal was agreed upon, then the priorities, then the project (rather than a blueprint imposed upon participants, as was the case with Dennis).
- The referendum timing allowed congestion charging to pass *despite* the political party in charge at the time, not because of it. A seven-month trial also allowed residents to experience and understand the congestion charging in practice.
- Urban development and quality of life have been somewhat more institutionalized, through various bureaus (such as the National Road Administration and the National Rail Administration combining to form Trafikverket, as well as the temporary Miljögiftskansliet).
- The role of civil servants/experts has arguably increased, and some added legitimacy was given to the latter rounds of negotiations by studies from impartial agencies, such as the Swedish Society for Nature Conservation. In consequence, relationships between political and non-political officeholders have bettered in the process.⁶²

⁶² This is not to say that politicians and planners/civil servants have not worked together in the past. Such strong relationships were evident in the subway decisions of the 1940s and 1950s, but over the decades strains emerged between politicians and experts. The 1958 Regional Plan for Stockholm and the rest of the metropolitan area was one of the first regional plans in Sweden to have been drafted and approved under the rules of the national 1947 Building Act. Thus began a tradition that CF Ahlberg and political decision-makers followed during Ahlberg's 25 years as the Director of Regional Planning and that still remains: that in contrast to regional plans in other parts of Sweden, those for the Stockholm region both reflected and faithfully followed the current national legislation and were developed in consultation with relevant

In Stockholm, many of the very same infrastructural priorities have remained on the regional planning agenda since the 1940s, albeit perhaps implemented in a different time frame or order.⁶³ Even as the Liberals and Social Democrats have continued active engagement in transport and housing development at the regional level,⁶⁴ a major difference is that national government politicians have assumed a greater role in Stockholm's transportation development, and more conservative party politicians (Moderates) are now also actively involved in urban development issues. Some of the latter is explained by the important role that accessibility and environmental sustainability in Stockholm play in fostering the economic growth and competitiveness of the city.⁶⁵

In recent decades, Stockholm's labor and housing markets have outgrown both city and county administrative limits and economic growth has been even more rapid than population growth, notwithstanding economic downturns and the global economic crisis. Scandinavia's largest city is now in the position to assume a role as a successful model for a European capital city built on innovation, sustainable growth and diversity. But to do so, the city-region has to function well, meaning that employers and workers need streamlined mobility. Private sector advocates may have lagged in their support of congestion charges for a variety of reasons, many of them having to do with partisan

constituencies, including political parties. In the planning documents and related texts from the period, as well as memoirs and interviews conducted later, it is evident that transportation and housing were—and still are—seen as highly interdependent. This is reflected, among other things, in the appointment of responsible politicians for directing the analyses of underlying key issues, a situation that kept politicians and technical experts in relationship with each other.

⁶³ Stockholm's first post-WWII Master plan, The Stockholm Plan of 1952, a 500-page document, was the result of a comprehensive programming and planning process that teamed many of Sweden's leading experts from Stockholm and beyond. The stated goal for the plan was not, as previous plans, merely to provide a common map of planned transportation and housing infrastructure with descriptions and arguments. Rather, it was meant to put Stockholm's development in an international, national and regional perspective and provide planning advice based on the best possible forecasting and development analyses. It came to set the standard for urban development where the development of rail-based public transit was wholly integrated with the localization and design of new neighborhoods and districts using modernist architectural principles.

⁶⁴ This model for Stockholm's outer districts and particularly the New Towns such as Vällingby became famous internationally and were praised by the International Society of Architects. Within Sweden, Vällingby was advertised as an "ABC city"—linking workplaces (*arbete*), housing (*bostäder*) and urban functions (*centrum*). The parties most vigorously supportive of these types of housing policies were the parties on the left, the Social Democrats and the Left Party, but also the Liberals (Folkpartiet) who placed a high priority on social welfare issues.

⁶⁵ Stockholm's current period of growth has been more or less continuous since 1981. In that year the urban population was just 650 thousand and is now over 900 thousand. Respective figures for Stockholm County were 1.5 million /1981) and 2.2 million (2014). Note that growth has been somewhat lower within the city limits than in the metropolitan area. Nevertheless, it is the growth of the population within the Stockholm city limits that generates the most debate regarding the future of the region.

loyalties and struggles among political parties to win electoral contests. But once congestion charging showed itself to be a good solution to problems of traffic management and revenue generation, and once Stockholm began to garner attention for the environmental sustainability gains produced by limiting automobile usage, they have come on board.

Again, Carl Cederschiöld notes the role that urban growth played in propelling congestion charging, saying, “In 2007 with the congestion charges being decided, politicians from all sides found, knew that we can’t go on like this. Something has to be done. The region is growing by 40,000 people a year.”

Key figures in the introduction of congestion charging in Stockholm:

Annika Billström, City Commissioner for Finance (de facto Mayor of Stockholm): Billström was interested in the potential for congestion charging and hoped to use her first term to explore various opportunities. During the 2002 election, she promised that there would be no trial during her first term—a promise she was later compelled to break upon direct orders from the leader of her party at the national level Göran Persson.

To fully control the implementation of the congestion charging experiment, Billström created and governed a project office (Miljöavgiftskansliet, MAK) and appointed as a leader a civil servant she had worked with earlier and knew as party comrade (Gunnar Söderholm). According to all interviews he played a crucial role for making the congestion charging experiment possible. The same goes for the project leader appointed by the National Road administration (Birger Höök).

Minority Leader on the City Council 2002-2006 (M) Kristina Axén Olin (b.1962), previously City Commissioner for Social Affairs, Commissioner for Finance from 2006, led the opposition to congestion charging within the right political bloc.

Social Democratic Party Leader and Prime Minister 1996-2006 Göran Persson (b 1949) pushed through a parliamentary decision to produce the congestion charging trial and to hold a local referendum following the trial—but left the political scene at the same time as Billström, when the Moderates regained control of both the city council and the national government in 2006.

Moderate Party leader and Prime Minister 2006—present Fredrik Reinfeldt (b.1965) was initially against the congestion charge for Stockholm but following the referendum in Stockholm that showed Stockholmers in support of the charge (held during the same election in 2006), drove the parliamentary decision to make the congestion charge permanent in Stockholm from 2007 and in Gothenburg 2013 as well as a 2014 decision to raise and widen the charging scheme in Stockholm with additional revenues used to contribute to new subway expansions.

Conclusion: Political Leadership in Stockholm's Transformation

Although the leading figures behind the congestion charges can be debated, it would not be accurate to credit only the Green and Stockholm parties, in alliance with Social Democrat Mayor Annika Billström, with credit for introducing congestion charging in Stockholm. Rather, this case suggests that the idea of road charges in some form has been evaluated, packaged, spun, wrangled and debated by all parties for decades, in Stockholm and at the regional and national levels, both before and after the trial and referendum of 2006. Formally, the new Prime Minister Fredrik Reinfeldt and Finance Minister Anders Borg were responsible for the 2007 proposition upon which the parliamentary decision-making process was based, but smaller parties such as the Stockholm Party at the local level and the Green Party at the national level had considerable influence in this vote as well. Strategic maneuvers by Annika Billström and Carl Cederschiöld before and after this parliamentary discussion also proved crucial in influencing the outcome. For all these reasons, it is difficult to attribute innovative transport decisions to an individual or a single organization or party.

As for the origins of the policy, Bengt Dennis can be credited with formally adding road charges to a financial package for the Dennis Agreement package, despite the package falling apart within six years. Yet it was Göran Persson and his supporters within the Social Democrats who made the strategic decision to instruct their Stockholm party colleagues to introduce a congestion charging trial, a decision carried forward by Annika Billström with great political acumen and skill. Persson's moderate colleague Fredrik Reinfeldt and Sweden's Financial Minister Anders Borg can be given credit for the final decision to make the charge permanent in 2007, and for supporting the extensions to the charging system that are now leading to both a major new subway extension and to municipal agreements to build urgently needed transit oriented housing. Activists and the media also played an important role in helping to shape public opinion.

Overall, then, it would be more accurate to say that innovative leadership in major transportation investments and policy in Stockholm reflects the contribution of key individuals—leaders—in achieving support their proposals in the City Council and the national parliament respectively in a specific economic, social and political context. (And the historical record further suggests that there was no singular leader that made congestion charging a reality because the whole process involved so many groups and steps.) Throughout the process they also needed to convince influential subordinate authorities and associated bureaucrats, and these processes were time-consuming and demanding. In the cases we studied, effective leaders seemed to have ambitious and visionary goals but also remarkable patience and tenacity. By contrast, when leading

politicians and parties sought to force decisions, disable the opposition or set ultimatums they were either typically sent “back to the drawing board” to be re-evaluated, discussed again, tested, and—in the case of the congestion charge—re-legitimized by a popular vote.

The case also notes some types of approaches that tend to be used to move forward transformative transport decisions. The first is the use of the “*full scale experiment*,” where new policies or systems are tested at a scale large enough to reduce various types of uncertainty and build acceptance, but small enough to be dismantled if proven ineffective. The congestion charging pilot is a clear example of this approach that led to a dramatic reversal of public opinion from strongly negative to positive. Even the subway decision of 1941 that set of Stockholm’s geographic expansion and can in a sense be regarded as a type of full scale experiment that paired a general decision of principle regarding commitment to subways with a separate decision to build the entire first line. Both decisions anticipated broader applications of policy and expansions, but took an incremental approach.

From studying these differences and the processes that preceded them, we can conclude with some other additional takeaways on the subject of political leadership:

- *Open and closed negotiations* are both useful, but the order of these matters. From this case study, it appears that starting with an open discussion and moving to a closed negotiation is more effective, as was employed by Carl Cederschiöld. By contrast, Bengt Dennis started with a closed agenda and moved to widely publicized negotiations, which did not build trust or reduce uncertainty.
- *Setting limits on the scope of the negotiation* is key. Without limits or trade-offs from the outset, the negotiations run the risk of spiraling out of control. Some of these imposed limits might include:
 - *Elections or electoral timing*
 - *Legislation*
 - *Finances*
 - *Early commitment to other infrastructure projects*
 - *Physical realities (i.e. Stockholm being surrounded by water)*
 - *Context and global events (i.e. war).*
- *Perseverance* through periods of uncertainty and divergent opinions is as or more important as perseverance during times of cooperation. Conflict is just as important as consensus, and both are to be expected in an effective negotiation.
- *Language* is key in shaping public opinion. Calling the congestion *tax* a *toll* was much less favorable, and the phrasing of the referenda in the surrounding municipalities likely affected how it was perceived. In addition, continuity in language can be similarly important (e.g. the use of the words “negotiation” and “package”).
- *Fostering a dialogue* between planners/technocrats and politicians is important for seamless integration of transport policies. If technocrats are not being heard or are not bearing in mind political constraints (or aforementioned “limits”), innovative policies have little chance of taking root. While the government did

not have to invest in such an expensive trial, IBM's sleek, state-of-the-art technology helped to make the system more user-friendly and thus more politically palatable.

Despite the obvious success of these strategies, there are many critics of the process and of congestion charge as it stands in practice (particularly in Sweden, which has a strong culture of compromise). Some criticisms of the Stockholm experiences, as relayed during our interviews, are as follows:

- Revenue from the congestion charging has heretofore gone towards roads, not public transportation as was promised. (However, the charge is set to double in 2016, with the surplus revenue going towards public transportation.)
- Many informants have noted that much of the success of the trial was due to chance and context. For example, a congestion charge referendum in the city of Gothenburg has not passed, despite going through similar procedures.
- There is no real or singular hero in the negotiations, although Cederschiöld and Billström certainly played vital roles.
- The role of congestion charging should not be overstated in assessing how the transport-housing nexus has shifted.
- There are still many disagreements regarding priorities in the transportation budget.
- The environmental reasons for congestion charging have often been misconstrued to be about particular matter or pollution—the argument is actually about de-prioritizing roads (fewer cars means fewer roads and more green space).
- Looming questions remain over how housing strategies must be transformed with increased growth, especially in immigrant communities not in the city center. The city's goal of installing at least 140,000 new housing units by 2030 is seen as overly ambitious by some.

Yet even with these criticisms, it is undeniable in the period from the 1970s to the present Stockholm has experienced major transformations in revenue/financing sources, institutions and the institutionalization of the housing-transport nexus, communication and coordination between the different levels of government, and a certain willingness on the part of both politicians and citizens to make sacrifices on behalf of the overall picture. Recent innovative policies in Stockholm have been coupled by a transformation in how the role of transportation is perceived. Transportation has been transformed from being seen primarily as an enabler of mobility and a complement to housing (i.e. a mode of infrastructural servicing) to the basis for an integrated regional system, which in turn is perceived as crucial to the achievement of larger urban and national development aims. The intensified focus on dense urban living has partly resulted from congestion charging, but is also now connected to many other agendas, including economic competitiveness and environmental sustainability. The process followed to arrive at this outcome was marked by successes and failures, conflict and consensus, revolving around congestion pricing as a policy as well as around who would get political “credit” for introducing or rejecting this policy. If we accept that the process is as important as the outcome, knowing exactly which process to follow to keep the idea of congestion charging alive, to

know at what point in time a new framing is necessary, and to know which organizational or political tactics will help achieve both, says a great deal about political leadership. One might say that there is now enhanced capacity to have a healthy conversation about urban sustainability, including the role of transportation. As summarized by Torbjörn Sunesson:

My impression is that we have had a development regarding the integration between transport planning and urban planning, during the twelve years that I've been part of the Transport Administration. We have developed the understanding—through the livable city, that we are now dealing with the region. These have been small pieces contributing to the understanding that you have to have a more integrated transport planning and urban planning.

DRAFT

References

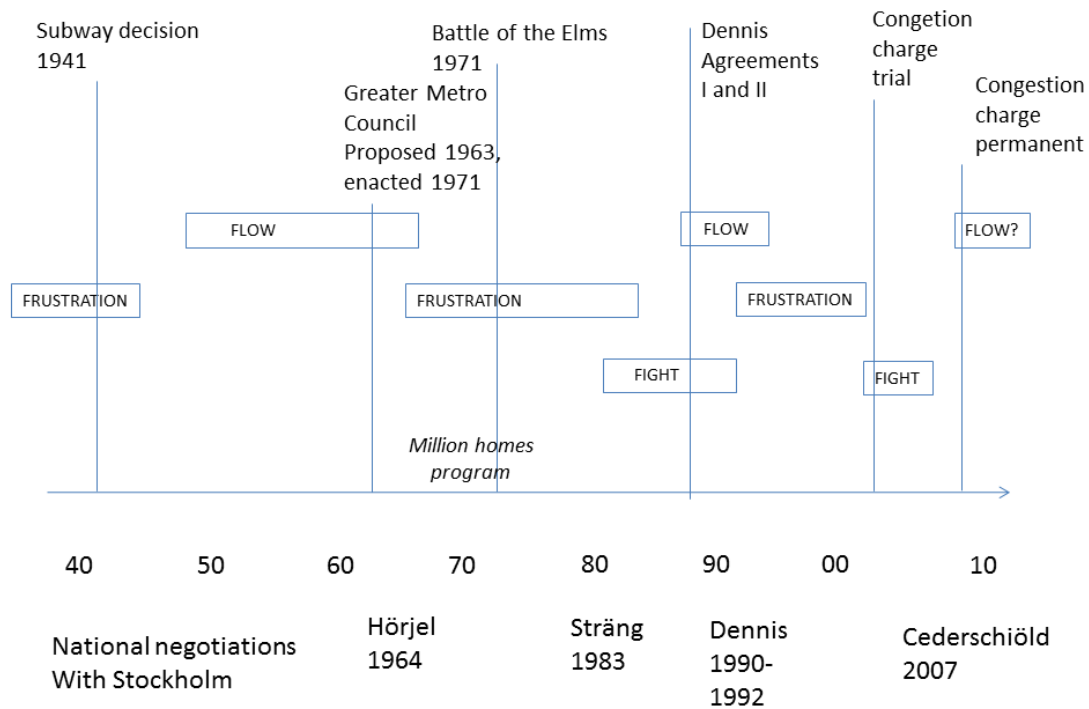
- Andersson, Magnus, *Stockholm's Annual Rings: A glimpse into the development of the City*. Stockholm: Stockholmia Förlag, 1998.
- Börjesson, M, Eliasson, J. et al. (2012), "The Stockholm congestion charges – 5 years on. Effects, acceptability and lessons learnt." *Transport Policy*, Vol 20; pp 1-12.
- Börjesson, M.M, Jonsson, D and Lundberg, M. (2013), *The long term benefits of Public transport: the case of the Stockholm subway system*. Report 2012: 5, Stockholm: expert group on public economics, Ministry of Economic Affairs, Stockholm (in Swedish)
- Childs, Marquis W. (1936) *Sweden: The Middle Way* 1936 Faber & Faber Ltd, London
- Deland, Mats (2001): *The Social City: Middle-Way approaches to housing and suburban governmentality in Southern Stockholm, 1900-1945*. Stockholm: Stockholm University Department of History, Institute of Urban History.
- Eliasson, Jonas (2014), The Stockholm congestion charges: an overview, Centre for Transport Studies Stockholm, Working Paper 2014: 7.
- Eliasson, Jonas (2008), "Lessons from the Stockholm congestion charging trial." *Transport Policy*, Vol 15 No. 6, pp 395-404.
- Eliasson, J. (2009a). A cost-benefit analysis of the Stockholm congestion charging system. *Transportation Research Part A: Policy and Practice*, 43(4), 468–480.
- Eliasson, J. (2009b) Expected and unexpected in the Stockholm trial: The views of a transport researcher (Eds.). Gullberg, A., & Isaksson, K. *Congestion Taxes in City Traffic. Lessons learnt from the Stockholm Trial*. Lund, Sweden: Nordic Academic Press.
- Eliasson, Jonas, Hultkrantz, L. et al. (2009), "The Stockholm congestion-charging trial 2006L Overview of effects." *Transportation Research*, Vol 43 No.3; pp 240-250.
- Eliasson, Jonas and Lundberg, M. (2002), "Road charging in urban areas: A survey of knowledge from a Swedish point of view," *The Swedish Road Administration*, Borlänge.
- Eliasson, Jonas and Mattsson, LG (2006), "Equity effects of congestion pricing: quantitative methodology and a case study for Stockholm." *Transportation Research*, Vol 40 No.7; pp 602-620.
- Elmbrant, B. (2010) *Stockholmskärlek: en bok om Hjalmar Mehr*. Stockholm: bokförlaget Atlas.

- Enflo, K., M. Henning and L. Schön (2010), “Swedish regional GPP 1855-2000. Estimations and general trends in the Swedish regional system,” *Working Papers in Economic History*, 2010, WP 10-03
- Kungliga Tekniska Högskolan (1960), *Bilstaden*, Stockholm: KTH Institutionen för Stadsbyggnad.
- Gullberg, Anders and Arne Kaijser (2004) “City Building Regimes in Post-War Stockholm.” *Journal of Urban Technology*, Vol 11 No. 2; pp 13-29.
- Gullberg, Anders and Karolina Isaksson (Eds.) (2009) *Congestion Taxes in City Traffic: Lessons learnt from the Stockholm Trial*. Sweden: Nordic Academic Press.
- Hårsman, Björn and John M. Quigley (2010), ”Political and Public Acceptability of Congestion Pricing: Ideology and Self Interest.” Berkeley: Berkeley Program on Housing and Urban Policy, Working paper No. W09-005
- Johnson, Göran and Bo Malmsten (2004): *Stockholm: region i tillväxt*. Stockholm: Stockholm County Council.
- Larsson, Yngve (1977) *My life in the City Hall* (in Swedish; original title *Mitt liv i stadshuset*). Stockholm: Stockholms kommunalförvaltning.
- Lundberg, Anders (1996), “Restructuring of The Swedish State Railways.” *Japan Railway & Transport Review*, http://www.jrtr.net/jrtr08/pdf/f22_lun.pdf.
- Malmsten, Bo and Magnus Persson (2001), *The Dennis Package: conflicts and solutions* (In Swedish) Stockholm County Council, Office of Regional Planning and Transportation, report 2007:4
- Malmsten, Bo and Magnus Carle (2007) *From Hörjel to Cederschöld—40 years of negotiations between the national government and the region*. (In Swedish). Stockholm County Council, Office of Regional Planning and Transportation, report 2007:4
- Sidenbladh, Göran (1981), *Planning for Stockholm 1923-1958*. (in Swedish). Stockholm: Stockholmia förlag 1981
- City of Stockholm Annual Report. <http://www.stockholmannualreport.se/en/>

Appendix A. Transportation Leaders in Stockholm

Who	Role	Political Party	Major influence	Key strategies
Yngve Larsson	City Planning Commissioner (1940-1966)	Liberal People's Party	Achieved a decision of principle and first investment in the subway system	Thorough understanding of both technical and political aspects: "an answer for every critique"
Hjalmar Mehr	Mayor of Stockholm (1958-1966, 1970-1971); Governor of Stockholm (1971-1977)	Social Democratic Party	Institutionalized a regional perspective on development including coordinated transportation provision and planning; Redefined the financial relationship between the City, Region and National government for transport provision	Developed a clear vision for Stockholm's development and seized every opportunity to realize it—but also a pragmatist with a clear understanding of political realities and a willingness to compromise
Bengt Dennis	Governor of the Swedish Central Bank (1982-1993)	Social Democratic Party	Put road charges on the agenda as part of an actual investment package	Determined a "balanced" package that appealed to a broad enough majority to assure a yes vote
The Green and Stockholm Parties (Åsa Romson, Agneta Dreber, others)	Asa Romson: Swedish Minister for the Environment; Deputy Prime Minister of Sweden; Spokesperson of the Green Party (2014-present) Agneta Dreber: Vice Mayor of the City of Stockholm (1988-1991); One of the founders of the Stockholm Party in 1979	The Green and Stockholm Parties	Changed the balance of power between the major and smaller parties. Moved road tolls to congestion charges and forced the trial	Positioned demand management motivated road charges as an urban development initiative; used swing vote power and links to activists to seize opportunities to effect change. Decoupled congestion charges from other investments/policies
Annika Billström	First female Mayor of Stockholm (2002-2006)	Social Democratic Party	Announced would not have congestion charging during first term, later helped to implement successful trial	Political perseverance, long-term thinking (after short-term thinking failed)
Carl Cederschiöld	Finance Commissioner (1991-1994) Mayor of Stockholm (1998-2002)	Moderate Party	Appointed by national government as negotiator for transportation agreement concerning Stockholm region	Brought representatives from all concerned municipalities to the table; closed negotiations in order to come to agreement

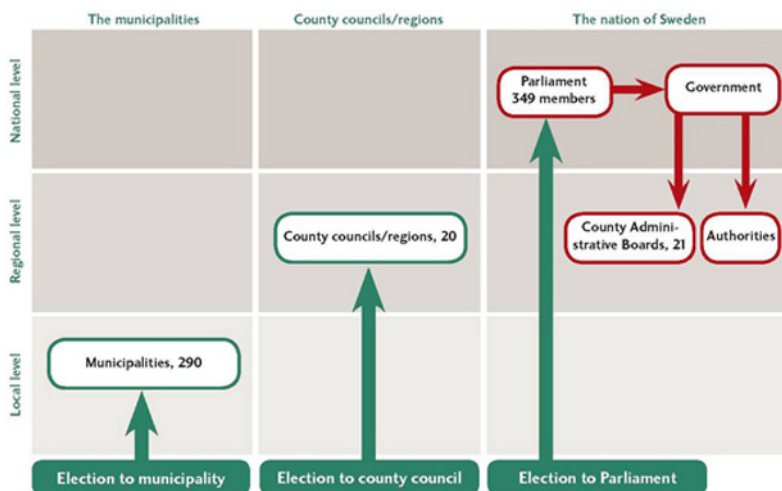
Appendix B. Transportation Timeline in Stockholm



Appendix C. Political Structure

Sweden's 3 Democratic Levels and Different Actors

Source: <http://skl.se/tjanster/englishpages/municipalitiescountycouncilsandregions/swedensdemocraticsystem.1301.html>



National Government Structure	
<i>Source: https://sweden.se/wp-content/uploads/2014/11/Government-high-res.pdf</i>	
Riksdag/Parliament	<ul style="list-style-type: none"> - Consists of 349 members chosen through direct elections and who serve 4 year terms. - Makes decisions and the government implements them - Government submits proposals for new laws or law amendments to Riksdag - Appoints a Prime Minister
Government	<ul style="list-style-type: none"> - Consists of a Prime Minister and Cabinet Ministers - Governs the country but is accountable to Riksdag - Personally chooses ministers to make up the cabinet
Ministers	<ul style="list-style-type: none"> - Represent political party/parties in power - Responsibility of overseeing/providing many public services

Local and Regional Administration	
<i>Source: https://sweden.se/wp-content/uploads/2014/11/Government-high-res.pdf</i>	
Regional	<ul style="list-style-type: none"> - 20 counties - Political tasks undertaken by county councils
Local	<ul style="list-style-type: none"> - 290 municipalities - Each have an elected assembly or council - Responsible for providing a significant proportion of all public services - Have considerable degree of autonomy and independent powers of taxation

Main Political Parties
Social Democratic Party (Socialdemokraterna)
Moderate Party (Moderaterna)
Sweden Democrats (Sverigedemokraterna)
Green Party (Miljöpartiet de Gröna)
Centre Party (Centerpartiet)
Left Party (Vänsterpartiet)
Liberal Party (Folkpartiet Liberalerna)
Christian Democrats (Kristdemokraterna)

Appendix 1. Interview Guide for Interviews

Interview guide used to structure discussions regarding political decisions, leadership and innovative transportation solutions.

1. How were you involved in the following decisions? a) congestion charging, b) previous major decisions such as the Dennis package c) later decisions such as current subway expansion negotiations?
2. What is your/your party's/ your organization's standpoint and what role did you play in these decisions? Did you change your view at any point? If so, how and why?
3. What actors/interests/representatives do you feel were instrumental in facilitating or hindering decisionmaking (who/why?) Did any individuals or groups have a particularly important role as inspiration/opposition?
4. What role did your own experience have in this decision? What was the role of factors such as social welfare goals, distributive issues, economic, environmental or other sustainability goals and why?
5. What role did financial issues play in the decision (which/why)
6. What role did cooperation or conflict among politicians at the local, regional and national levels play?
7. What role did cooperation or conflict among political parties or party coalitions play?
8. What role did civil servants/experts/public opinion/activists/the media play in the decisionmaking process?
9. How important was an individual politician's leadership capacity in driving innovative transport decisions?
10. Do you see any difference between transportation and other policy areas?
11. Is there anything else you would like to add?

Appendix 2. Individuals Interviewed

2014 Interviews

1. **Richard Murray**, an expert in public administration, was one of the founders of the Stockholm Party (1979) an important "swing vote" party that affected city policy on a number of occasions. During the 1980's he was a Stockholm City Councilman and held various committee posts. Since 1993 he has been chairman of the Ecopark Alliance in Stockholm (Förbundet för Ekoparken). More recently he has served in the climate change advisory board for Global Utmaning, an independent think tank.
2. **Anna Wersäll** is with the Stockholm Chamber of Commerce and has been an important public figure in transportation issues for 20 years.
3. **Susanne Ing** worked with the City of Stockholm's first comprehensive plan in the mid 1980's She was assistant secretary to both the national government's Metropolitan Development Commission (*Storstadsutredningen*) and for evaluations and negotiations related to the Dennis Agreement during her tenure at the Stockholm County Council's office of regional planning and transportation in the late 1980's-early 1990's. Since 2008 she has been working with strategic issues for the National Transportation Authority (*Trafikverket*).
4. **Agneta Dreber** was a leading figure in the creation of the Stockholm Party in 1979, a city councilman 1979-1992 (1991?) and City Commissioner 1988-1991. Reducing the number of cars in Stockholm was a key issue for the Stockholm Party, which is sometimes described as the urban predecessor of the Green Party in the Stockholm region.
5. **Bengt Dennis** was Labor Ministry secretary in the early 1970's and thereafter active as a journalist until his appointment as head of Sweden's national bank (*riksbanken*) in 1982 by then prime minister Olof Palme. Dennis led the negotiations and associated delegation that presented the "Dennis package" or "Dennis Agreement" in 1992.
6. **Catharina Håkansson Boman** (Center Party) was secretary of the Ministry of Commerce (*Näringsdepartementet*) 2010 and previously chief editor for the newspaper SödermanlandsNyheter. Since 2011 she has worked with the Government Offices of Sweden (*Regeringskansliet*) as assistant lead negotiator as well as associated legislative processes supporting decisions including the subway extensions to Nacka.
7. **Erik Bromander** was lead secretary in the 2013 Stockholm negotiation (major transportation infrastructure package). He had previously worked with several national ministries and participated in national evaluations of changes in national legislation necessary to make the pilot demonstration of congestion charges possible.
8. **Bo Malmsten** was a councilman in the Municipality of Haninge (south of Stockholm) in the 1970s, Transportation director for the Stockholm County Council (Office of Regional Planning and Transportation) 1984-1993 and Director of Regional Planning for the same office 1994 – 2001. He was lead secretary for the Dennis Agreement and later advised the Stockholm agreement as an expert.
9. **Måns Lönnroth** (Social Democrat) has held posts as Secretary for the Ministry of Environment, Executive Director for Mistra (foundation for strategic environmental research) and board member for the International Institute for Sustainable Development, Canada (IISD) and the Volvo Research and Educational Foundation (VREF). He is currently also a member of Global Utmaning's climate change advisory group.
10. **Carl Cederschiöld** (Moderate) was a member of the Stockholm City Council 1976-2002,

- Commissioner for Industrial Affairs 1979-91 and Finance Commissioner⁶⁶1991-94 and 1998- 2002. He was appointed by the national government to lead negotiations for national/city/regional negotiations for major infrastructure investments after the decision to introduce congestion charging.
11. **Jan O Karlsson**(Social Democrat) worked in the Prime Minister’s office in the 1970’s and was national secretary for the Agricultural and Finance Ministries 1982-1988. He served as member/leader in the European Court of Auditors 1995-2001 and as Assistant Foreign Secretary 2002-2003. In 1990-1991 he led the national government’s Metropolitan Development Commission (Storstadsutredning)which among other things proposed the appointment of Bengt Dennis as chief negotiator for transport investments with the Stockholm Region (Dennis Agreement)
 12. **Åsa Romson** (Green Party) was a member of the Stockholm City Council 2002-2010and representative for the Green Party in Stockholm2004-2006. She played a major role in the implementation of the congestion charge pilot/demonstration. Since 2010 she has served in the national parliament and since 2011 is one of two party leaders for the Swedish Green Party.
 13. **Bosse Ringholm** (Social Democrat) was County Councilor for transportation issues and later County Councilor for Finance, Stockholm County Council 1983-1997. He served in the national parliament 2002-2010 and was Sweden’s Minister of Finance 1999-2006.
 14. **Annika Billström** (Social Democrat) was Stockholm’s Commissioner for Streets 1994-1998, minority party leader 1998-2002 and Finance Commissioner 2002-2006 (see note 1). She led the implementation of the congestion charging trial in Stockholm upon ”orders” from the national government.

2015 Interviews

1. **Magnus Carle**, transport consultant, Ellemce. Formerly employed at the European Commission, head of department at Stockholm County, Office of Regional Planning and Urban Transportation. First director of the City of Stockholm CC Office (“Miljöavgiftskansliet”), quit after disagreement with city political leadership. Travels to Stockholm over day, arriving 12.33, leaving 6.22 PM. CV: http://ellemce.se/2012_Magnus_Carle_CV.pdf
2. **Gunnar Söderholm**, Director, Environment and Health Administration in the City of Stockholm. Second director of the City of Stockholm CC Office. Tel + 46 76 122 88 10.
3. **Karolina Isaksson**, researcher, Swedish National Road and Transport Research Institute and KTH. Editor of book on the implementation of CC in Stockholm, a.o.
4. **Magnus Nilsson**, consultant in environmental, transport, climate and nature conservation policy. former press secretary, as well as chairman of the Stockholm division, at Swedish Society for Nature Conservation (“Naturskyddsföreningen”). A key figure in the lobbying for CC. Tel +46-(0)708-99 66 88. CV (in Swedish): <http://www.nilssonproduktion.se/wp-content/uploads/CV-dec-2014.pdf>
5. **Ulrika Francke**, CEO Tyréns architects. Former politician (fp/lib.) in the city of Stockholm as well as city director of urban planning 1992-96, city director of streets and real estate 1996-99.
6. **Elin Blume**, development leader housing, and **Robert Örtegren**, director of (state)

⁶⁶ The official English title for City Commissioners in Stockholm is Vice Mayor. The Finance Commissioner is the highest post among the Commissioners and is usually equated with being the Mayor of Stockholm though this is not strictly speaking accurate.

- transport infrastructure, Stockholm County Administrative Board. Both have a deep knowledge of contemporary planning of housing and transport infrastructure in a regional context, as civil servants representing the national government. Tel (Robert) +46 (0)10-2231689, (Elin) +46 (0)10-2231256. Visiting address Hantverkargatan 29.
7. **Carl Cederschiöld** (Moderate) was a member of the Stockholm City Council 1976-2002, Commissioner for Industrial Affairs 1979-91 and Finance Commissioner 1991-94 and 1998-2002. He was appointed by the national government to lead negotiations for national/city/regional negotiations for major infrastructure investments after the decision to introduce CC.
 8. **Torbjörn Sunesson**, Acting Director General at the Swedish Transport Administration (“Trafikverket”). Former director Market and Planning (2012-14), director Strategic Development (2010-12). Also Strategy Director (2008-10) and Chief Architect (2003-2008) at the former Swedish Road Administration (2008-10). Professor at the Swedish University of Agricultural Sciences (2005-09). Tel + 46 (0)73 067 58 46.
 9. **Måns Lönnroth** (social democrat), former CEO at The Swedish Foundation for Strategic Environmental Research (FORMAS), former State Secretary for the Environment.

DRAFT

Appendix 3. GDP and GRP in Sweden and Stockholm County 1940-2010

Year	GDP	GRP	Growth in percent per 5-year period		
			Period	GDP-growth	BRP-growth
1940	416 214	93 752	1930-40		28 % ⁶⁷
1945	457 513	98 780	1940-45	9,9 %	5,4
1950	600 123	124 195	1945-50	31,2	25,7
1955	706 571	152 417	1950-55	17,7	22,7
1960	836 045	187 984	1955-60	18,3	23,3
1965	1 076 043	246 056	1960-65	28,7	30,9
1970	1 315 775	305 983	1965-70	22,3	24,4
1975	1 494 901	336 317	1970-75	13,6	9,9
1980	1 597 429	347 680	1975-80	6,9	3,4
1985	1 751 368	406 443	1980-85	9,6	16,9
1990	1 971 770	487 913	1985-90	12,6	20,0
1995	2 041 029	530 620	1990-95	3,5	8,8
2000	2 425 973	691 280	1995-2000	18,9	30,3
2005	2 769 375	807 901	2000-005	14,2	16,9
2010	3 002 003	932 064	2005-010	8,4	15,4

Source: Statistics Sweden, and estimates provided by Christer Anderstig, WSP and in K Enflo, M Henning and L Schön (2010)

Gross domestic product, GDP and Gross Regional Product (Bruttoregionprodukt), GRP in Sweden and the Stockholm County 1940-2010 and growth in percent per 5-year period. Constant prices in million Swedish krona.

⁶⁷ The percentage growth 1930-1940 divided by two

Appendix 4. Population in Sweden, Stockholm County and the City of Stockholm 1900-2013 and Average Population Change

Population in Sweden, Stockholm County and the City of Stockholm 1900-2013 and average population change per year during the preceding decade.

Year	Sweden 1000's	National population, average annual change	Stockholm County population	Average annual change	Stockholm	Average annual change
1900	5 136		473 476		300 624	
1910	5 522	38 600	571 504	9 802	342 323	4 170
1920	5 904	38 200	662634	9 113	419 440	7 712
1930	6 142	23 800	767 292	10 466	502 213	8 277
1940	6 371	22 900	878 163	11 087	590 503	8 829
1950	7 041	67 000	1 101 786	22 362	744 143	15 364
1960	7 498	45 700	1 271 014	16 923	808 294	6 415
1970	8 081	58 300	1 478 012	20 700	744 912	-6 338
1980	8 318	23 700	1 528 200	5 019	647 214	-9770
1990	8 591	27 300	1 641 669	11 347	674 452	2 724
2000	8 883	29 200	1 823 210	18 154	750 348	7 590
2010	9 416	53 300	2 054 343	23 113	847 073	9673
2013 ⁶⁸	9 645	76 300	2 163 042	36 233	897 700	16 875

Source: Statistics Sweden

⁶⁸ Average increase per year 2010-2013.

Appendix 5. Maps of Stockholm County and the City of Stockholm

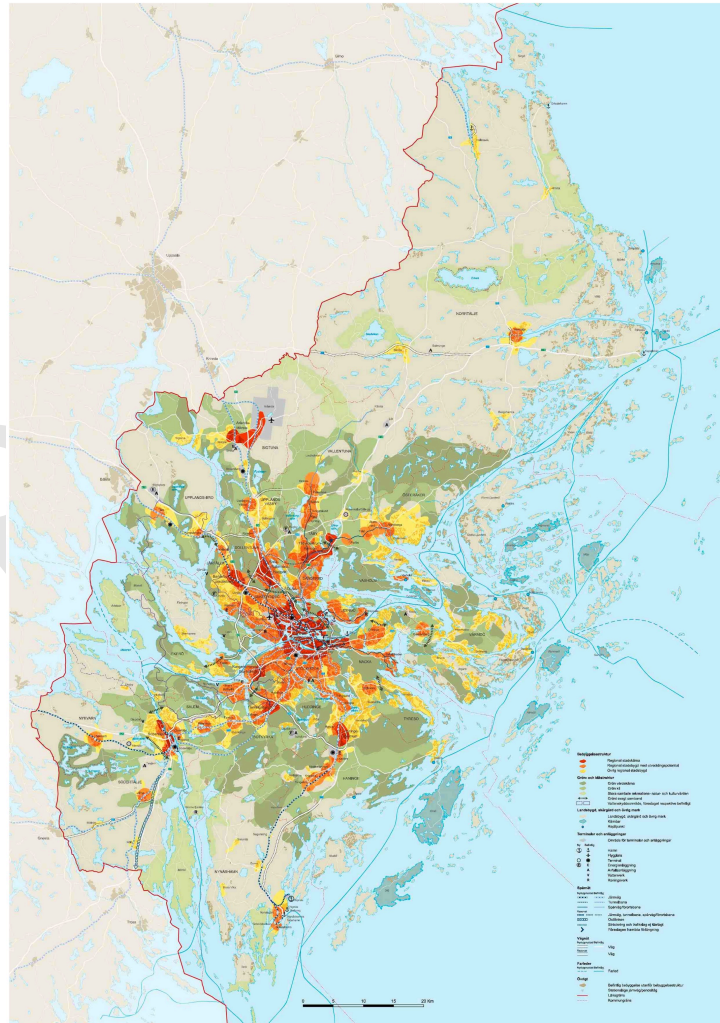
Stockholm County and the City of Stockholm

Stockholm County comprises 26 municipalities including the City of Stockholm.

Map 1: The Stockholm

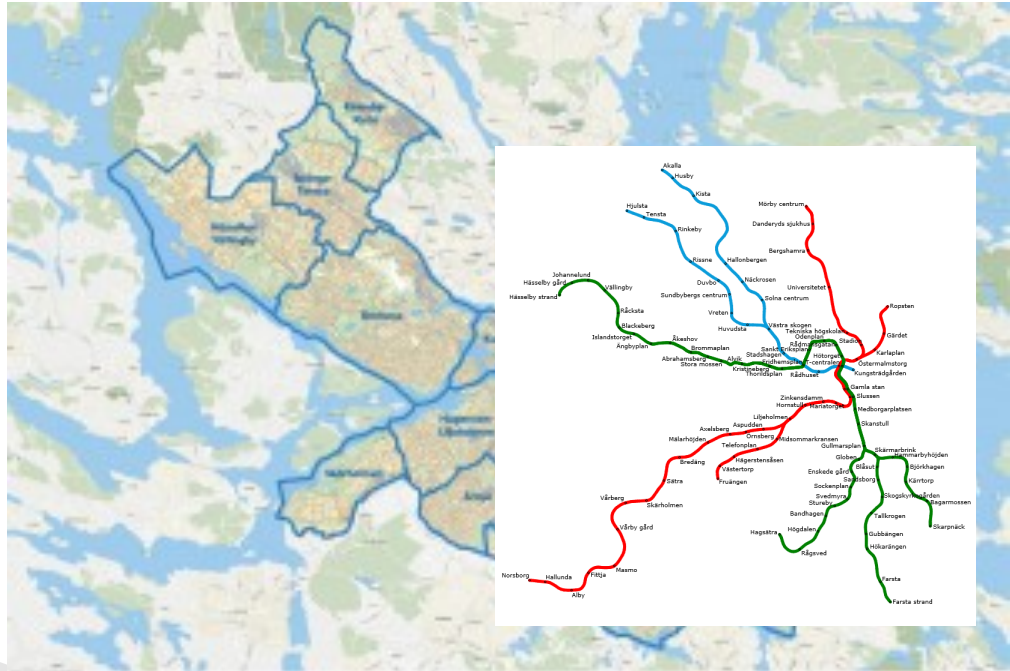
region. The Administrative border of the Stockholm County Council is noted in red. Current and planned land use is shown as colored areas: existing regional core and sub-centers (red); built areas with development potential (orange) and other built areas (yellow) as well as protected land and water areas (green, blue).

Source: Current regional plan for the Stockholm Region (RUF 2010), "Tillväxt, miljö och regionplanering", Stockholm County. Stockholm County Council, 2010



Map 2: the City of Stockholm

The City of Stockholm is comprised of 14 districts including land areas incorporated to the south and west of the the historical city in the early 1900's.



Map 3: Central Stockholm including the central business district directly north of the old city.

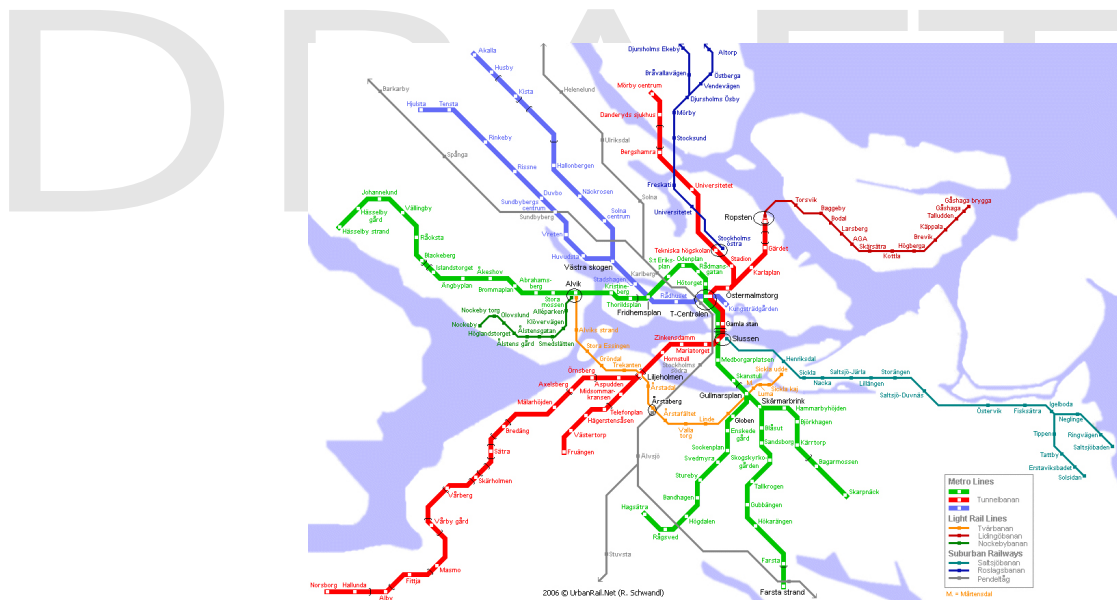


Appendix 6. The Stockholm Subway and Metropolitan Transit Lines

Schematic figures of Stockholm's subway system. The inner parts of the green lines were the first links constructed

The first map shows the subway lines; the second includes light rail and suburban railways. Since the creation of the metropolitan transit authority SL (1971), all public transport within Stockholm County is managed by a single public authority with a single ticketing and pricing system.

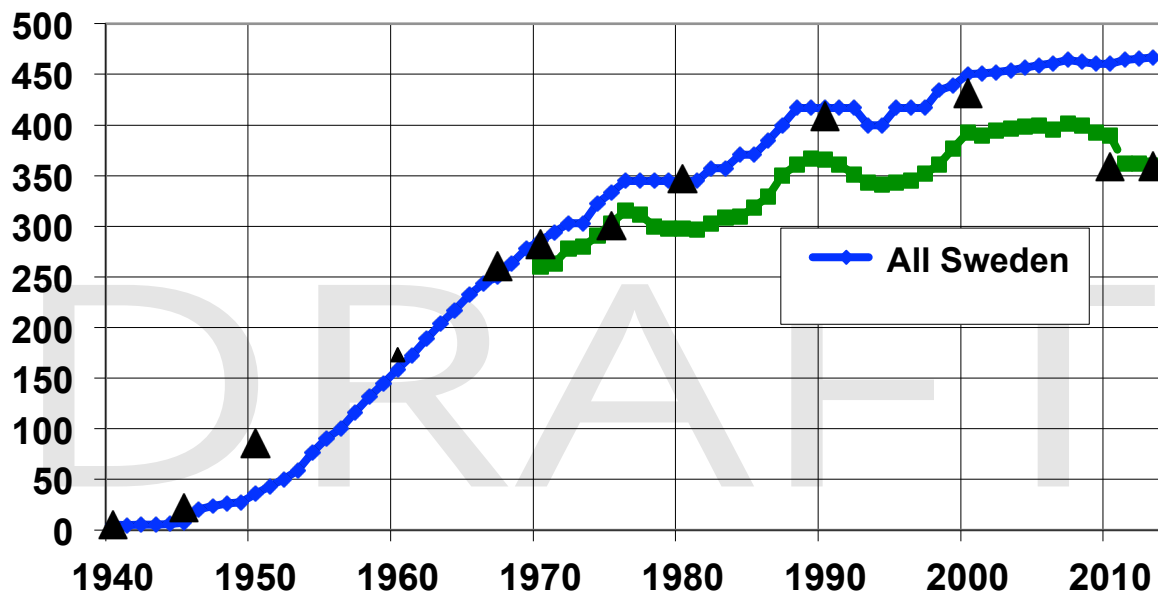
Source: www.sll.se/verksamhet/kollektivtrafik



Appendix 7. Car Ownership in Sweden, Stockholm County and the City of Stockholm, 1940-2010

Car ownership in Sweden (blue), the Stockholm County (green) and the city of Stockholm (black triangles) 1940-2011. Note the sharp decrease in car ownership for city inhabitants and a more modest decrease for county inhabitants. The share of young people with drivers' licenses has also decreased dramatically in recent decades.

Passenger cars per 1,000 inhabitants



Source: Data from StatisticSweden, the Swedish Transport Administration and the City of Stockholm provided by Göran Tegne'r, WSP