

Parking Benefit Districts – the transferability of a measure to reduce car dependency to a European contextⁱ

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Abstract:

Parking Benefit Districts (PBDs) are a parking measure where revenues from on-street parking charges are returned to the area where they are charged, and stakeholders in the area participate in prioritizing how the revenues are to be spent. The purpose of this article is to analyse whether and how a PBD programme can be transferred to a European context, and whether it can contribute to reduced car dependency. The first part of the article provides an overview of some salient features of PBD programmes in the USA through a literature survey. This is followed by results from interviews and from a focus group with civil servants and a deputy mayor in Stockholm. The results are used to analyse the conditions for implementing a PBD programme in Stockholm, as well as for analysing how such a programme can be designed to reduce car dependency. A main conclusion is that there are no legal barriers that render a PBD programme impossible in Stockholm, even though there are some legal restrictions. We also conclude that a PBD programme might contribute to reduced car dependency in two different ways, either by increasing acceptance for parking charges or by improving the alternatives to private cars. There seem to be several aspects in a PBD programme that can contribute to increased acceptance for parking charges. However, there is no tradition of working with these principles in Sweden and the programme's redistributive effects need to be taken into account when designing the programme.

Key words: parking charges, Parking Benefit District, acceptability, mobility services, participatory budgeting

1. Introduction

In the literature on traffic and the environment, many researchers have proposed and evaluated different legal and economic instruments (e.g. Rye 2002; Marsden 2006; Shoup 1997; Börjesson et al. 2012; Henriksson et al. 2011). One important long-term objective with these instruments is to keep the distance between urban amenities short in order to reduce transportation needs. An equally important objective is to favour less environmentally hazardous transport modes compared to

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private cars, and both legal and economic instruments have been highlighted as important means to achieve this (e.g. Banister 2008; Marshall and Banister 2000). These studies are a part of a growing literature on car dependency, which highlight how the structure of a city (Newman and Kenworthy 2006), as well as the social organisation of activities (Urry 2002), lead to urban structures where a car is more or less indispensable.

Parking measures have also been highlighted in this literature (e.g. Marsden 2006; Shoup 1997; Shoup 2005; Mingardo et al. 2015), and they can both be an integrated part of an urban planning strategy and constitute a part of legal and economic instruments. Parking measures can thus both contribute to a reduction in distances between urban amenities and favour more environmentally friendly transportation modes.

Many authors maintain that the absence of parking charges contributes to congestion, cruising for parking and increased car use (e.g. Shoup 2007). Introducing parking charges (Shoup 1997), preferably in combination with positive incentives (Marshall and Banister 2000; Hammadou and Papaix 2015), may thus be an efficient policy measure to steer towards more sustainable transport modes and reduce car dependency.

One major challenge in connection with introducing parking charges in new areas is public acceptance, and consequently having the political courage to implement these measures. In some areas of the United States, the revenues from curb parking have been returned to the community where they are charged. Stakeholders in the community are then involved in prioritizing how the revenues are to be spent. The most common argument for this measure, called Parking Benefit Districts (PBDs), is that it increases acceptance of parking charges (Shoup 2004), but it can also contribute to affordable housing (Shoup 2016).

There is an ongoing discussion on parking policies and car use in Europe. For instance Mingardo et al. argue that cities should strive towards making parking an integrated part of a travel demand strategy (Mingardo et al. 2015), and frame this in terms of three stages, of how parking policies seem to develop over time (in European cities, in general). Cities generally start with limited regulation in stage 1, introduce parking charges in stage 2 and finally integrate parking in a wider transport demand management program (including e.g. supply restraints, differentiated parking tariffs and work place parking levies) in stage 3. In the third stage the parking is no longer only reactive to problems, but become a tool to reach desired goals such as improved quality of life (Mingardo et al., 2015). Some cities in Europe are moving towards stage 3, for instance Edinburgh and Amsterdam (Mingardo et al., 2015). Similar developments are occurring in Sweden. For instance, Stockholm, as well as some other Swedish cities, has recently revised its parking policies for new developments. The city has applied green parking requirements since 2015, where the number of parking spaces in new developments is set in dialogue between the municipality and the developers within a certain interval. Furthermore, developers may reduce the number of parking spaces if they provide mobility services for the new buildings (e.g. a car club, home delivery boxes, cargo bikes) (Stockholm stad 2015). Stockholm is also on the verge of extending the parking charges for curb parking to the suburbs. The parking plan is quite ambitious and involves increasing parking charges in the city centre as well as a gradual extension of parking charges to the suburbs (Stockholm stad 2016c). This measure is an important part of Stockholm's urban mobility strategy (Stockholm stad 2012) and

supports the new policy for parking in new developments. Stockholm is thus striving towards making parking a part of a wider transport demand management program. A PBD programme may be a useful tool for Stockholm, as well as other European cities, when implementing their parking plans and moving towards a more integrated demand management parking program.

However, PBD programs have only, as far as we know, been implemented in the US, and the existing scientific articles deals with PBD from an American context (Kolozsvari and Shoup 2003; Shoup 2004; Shoup 2005; Shoup 2016), with the exception of a prospective study for a Chinese context (Shoup, Yuan and Jiang, 2016). European cities have (although there are considerable differences between European countries) a more centralized planning tradition than in the USA (Healey, 1998). Studying the feasibility of a PBD program in a European context (Stockholm) is thus new, and brings valuable insights of the transferability of the concept into a new context.

2. Research question/aim

The purpose of this article is to analyse whether and how a Parking Benefit District-inspired (PBD) programme can be transferred to a European context, and whether it can contribute to reduced car dependency. In order to answer this question, a case study of Stockholm has been carried out, with the particular focus on three aspects, namely:

1. If a PBD-inspired programme can increase acceptance for parking charges and thus reduce car dependency
2. If the revenues returned can reduce car dependency
3. If there are any barriers or restrictions that hinder the use of a PBD-inspired programme in Sweden

At the end of the article there will also be a discussion about possible designs and their effects on car dependency as well as whether the concept should be tested, and if so, when and where.

3. Methods for data collection and analysis

3.1 Methods for data collection

The methods used should be seen as qualitative, descriptive and interpretive, and as such primarily anchored in planning research from a social constructivist perspective. Three complementary methods have been used, namely a literature survey, semi-structured interviews and a focus group. Each method is described in greater depth below.

The literature survey was used to give a brief overview of PBD cases in the USA. The purpose was to collect information about how PBDs have worked and have been designed in the USA. The purpose was not to produce an extensive overview that covers all literature and cases, but rather to highlight key aspects of PBDs that can inspire a similar programme adapted to the Swedish context. Key aspects of PBDs have been collected from academic papers, as well as from more informal documents. Four cases of PBD programmes have been studied, namely Washington DC, Austin, Boulder and Old Pasadena. These cases were chosen as they illustrated three different designs of PBD. There is not much academic literature on these cases, and most information has been taken

from informal documents. The literature survey was analysed and grouped into the following themes:

- How is the PBD programme designed?
- How and how much of the revenues are returned to the community?
- How is the community involved in the programme?
- What measures were financed with the revenues?
- Possible key factors for successful implementation

The semi-structured interviews have been used to understand the perceived problems with implementing on-street parking charges in Stockholm and whether a PBD programme may be a pertinent concept to reduce these impediments. The interviews were semi-structured, which means that certain questions and themes were prepared before the interviews. The questions were open in order to avoid steering the informants too much. The pre-defined questions were followed-up by questions depending on the informant's answers. The advantage with this method is that the informants can elaborate on their answers and express their perceptions more freely. The interview can thus go into greater depth in areas highlighted by the particular informant. The interview guide included questions mainly regarding the following:

- Benefits and drawbacks, if any, that the informants perceive with a PBD programme
- Problems the informants perceived that a PBD programme could address
- Possible designs of PBD programme?
- Institutional barriers that render implementation difficult

By these questions we sought information about preconditions for possible PBD-like measures in Stockholm, from the interviewees/participants' point of view. This means that we were interested in their knowledge about administrative and legal conditions, their assessment of the feasibility, potential benefits and drawbacks, and finally their ideas about possible implementation (when, where, by what means etc.). The informants were selected to represent the municipal entities working with the development and implementation of the parking plan. Planners and managers at the entities responsible for the development and implementation of the parking plan were contacted. Civil servants working with a pilot project on participatory budgeting were also interviewed. The reason for interviewing these civil servants is that a participatory budgeting has a similar structure to a PBD programme, with the exception that the revenues are directly allocated from the municipality and not derived from on-street parking charges. Participatory budgeting projects also exist in other European countries, and each country has adapted the design to the local context (SKL, 2011). Finally, a deputy mayor of the City of Stockholm from the Green Party was interviewed to gain a better understating of the political feasibility of a PBD programme. The informants thus represented the department responsible for strategic planning (both at civil servant and management level), the department responsible for implementing the parking plan (both at civil servant and management level), a city district (civil servants) and the politician responsible for the traffic department. In total seven interviews were conducted. Six interviews were recorded and transcribed, and the seventh, with the deputy mayor, was documented by extensive notes (but was not recorded). All the informants, except the deputy mayor, were given the opportunity to read and comment on the quotations in the article. No substantial changes have been made to the quotations.

The data analysis was structured according to the four themes above. The informants' views on these themes were summarized as a first step. The following step was to prepare a focus group with the informants, where they could meet and discuss the themes together. The purpose with a focus group is, in contrast to one-to-one interviews, the interaction between the participants (Kitzinger, 1994). As the informants come from different departments with different expertise (strategic planning, implementation and legal issues, experience of a similar pilot project), it was interesting to bring these informants together to collectively discuss how such a programme could be implemented in Stockholm. The idea was not so much about finding contrasting views as to collectively reflect on and discuss how such a programme could be implemented in Stockholm.

The focus group started with three short presentations; the city of Stockholm's parking plan, a presentation of PBD and a presentation of a participatory budget pilot project in Stockholm. The presentation on PBD included the following themes; the PBD concept, lessons from the literature survey with particular focus on the implementation process, institutional barriers and possible designs (from the interviews). The presentation was followed by a discussion.

The following topics were treated in the discussion: if a PBD programme can facilitate the implementation of on-street parking charges, if a PBD programme can contribute to sustainable mobility and how the revenues can be returned to the community. Each theme was discussed separately. The first step was for all the participants to write down their thoughts on the themes. Then everyone presented their views and finally there was a general discussion on each theme. The discussion was mostly left to the participants, with some follow-up questions from the researchers.

Finally, the results from the focus groups were analysed together with the interviews. The analysis was structured under the four main themes mentioned above.

3.2 Analytical framework

The analytical framework is based on the literature on participatory planning, and especially Patsy Healey's concept of collaborative planning (Healey 1998). A Parking Benefit District programme implies a shift away from a hierarchical "command and control" governance structure, where the municipality and professional planners design and implement suitable measures, towards a more collaborative governance structure, where different stakeholders participate in the design and implementation of measures. This implies moving up Arnstein's ladder of citizen participation (Arnstein, 1969), from informing and consulting citizens towards creating partnerships with citizens. In the literature on participatory planning there are different justifications for increased citizen participation in urban planning. Campbell and Marshall (2000) categorise justifications depending on the level of participation and whether the focus is on the individual or the collective well-being. One of the justifications is deliberative democracy, which is similar to Healey's concept of collaborative planning (Healey, 1998). One of the principal ideas of collaborative planning is that local actors have considerable information, which is not necessarily available at the municipal level (Healey 1998). By collaborating in the decision-making process, this knowledge can be integrated into the decision-making and thus result in more suitable plans.

The underpinning assumptions for collaborative planning are that actors' preferences are not fixed and that they do not have all the necessary knowledge at the outset (Healey 1998). This implies that actors' preferences can change in dialogue with others. Healey calls this capacity to form a common

understanding “institutional capacity”. Collaborative planning thus focuses on creating an institutional capacity where different actors or stakeholders can meet, exchange ideas and collectively make decisions. Sager and Ravlun (2004) argue that this governance structure resembles a network where relations are based on solidarity and trust.

Another justification is instrumental participation, which is based on the individuals’ rights to participate and express their ideas (Campbell and Marshall, 2000). This justification is built on utilitarian assumption about rational individuals expressing their self-interest, and the focus of the public participation is less on deliberation and more on letting people express their individual preferences, for instance through voting.

In the literature on participatory planning, enhancing participation is often an aim in itself. For instance, participatory budgeting is often used to increase public participation as a way to deepen democracy and increase trust in public institutions (SKL, 2011). Participatory budgeting, which are initiatives with a similar design to Parking Benefit Districts, exist in different European countries. How these initiatives are designed is different in different countries and contexts. In some cases only citizens are allowed to participate and in other cases a range of different stakeholders can participate. Some initiatives involve deliberation between actors whilst others draw more on instrumental participation (SKL, 2011). The design of the participatory budgeting is adapted to the local context and planning traditions.

The literature on Parking Benefit Districts comes from another research tradition where the focus is more on creating acceptance for parking charges, than strengthening participation for its own sake. These initiatives draw on a client politics perspective, which highlights the importance of involving those who are likely to protest the most. According to James Wilson it is easier to implement policies where the benefits are concentrated and where the costs are distributed on many (see Shoup, 2005, p.437, for a discussion of the applicability of this concept to PBD). According to Shoup, a neighbourhood Parking Benefit District program should involve residents in a neighbourhood, as they are the most likely to organize and oppose the charges, but not include visitors who are less likely to organize and to protest (Shoup, 2005).

Whether stakeholders in a community are likely to accept parking charges could also be analysed in terms of commitment (Meyer and Allen 1991; Fernström et al. 2016). Commitment to local policies and measures involves many different factors such as moral obligations, perceived costs and benefits, previous policies and patterns of action in the city district. Positive commitment from several of these aspects means, of course, that a stakeholder is more likely to support or accept a specific policy or measure.

Yet another aspect to take into account is legitimization. The literature on Parking Benefit Districts seems to indicate that PBD programmes facilitate the introduction of parking charges in the USA (e.g. Kolozsvari and Shoup 2003). However, it is not certain that a measure considered legitimate in an American context would also be considered legitimate in a Swedish context. The European planning context is, even if there are differences between countries, built on a model with a stronger central administration and more hierarchical planning structure than in the USA (Healey, 1998). Conelly, Richardsson and Miles (2006) argue that what is deemed legitimate is to a large extent context dependent and may vary from one place to another. The local political, planning and participation

culture must thus be taken into account when implementing a PBD programme. We see legitimacy as socially constructed, and therefore to a large extent dependent on how planning and traffic management has developed locally and historically. What is seen as legitimate in one country may thus not be perceived as legitimate in another context, with e.g. different planning traditions. Equity aspects and the participation of different groups are for instance aspects that may influence the legitimacy of a PBD program. For instance Campbell and Marshall (2000) argue that increased participation do not necessarily lead to desirable distributional effects between different groups, and the state has traditionally been seen as the legitimate arbitrator of conflicting interests. This view is acknowledged by Flyvbjerg (1998) who argues that even if all stakeholders have the same formal rights to participate in decision-making, intangible power relations may largely influence the policy outcome. Furthermore, Flyvbjerg argues that power influences what counts as knowledge (Flyvbjerg 1998), and consequently determines who is listened to. These are aspects that may influence what is deemed legitimate in different contexts.

4. Results

4.1 Parking Benefit Districts in the USA

A Parking Benefit District (PBD) is a parking concept from the USA. The main idea of the concept is to charge for curb parking and to return the surplus from parking charges (or a part of the surplus) to the community where the charges are applied. The residents and/or other actors in the community are then involved in prioritizing how the revenues from on-street parking will be spent. Advocates for the concept generally advocate PBD as a measure to increase acceptance for parking charges (Shoup 2004). The underpinning argument is that the stakeholder will accept charges to a greater extent if they see tangible results in their community and if they are involved in the decision-making process on how the revenues are to be spent (Shoup 2004; Kolozsvari and Shoup 2003).

Several cities in the USA have PBD programmes and the design varies between different cities. There are PBDs for commercial areas as well as for residential areas (Canepa 2013).

Some important parameters in the design of a PBD programme are discussed below.

4.1.1 Involving the community is important

Involving the community is an essential part of a PBD programme, but how and the extent to which the community is involved differs between different PBD programmes. Some cities, such as Austin, involve stakeholders in the community directly through neighbourhood associations, while others work through an elected association (ULI 2012). In either case, it is important to work with stakeholder engagement in the community. There is often considerable stakeholder involvement before the PBD programme is implemented. For instance, in Austin there are requirements for extensive community involvement in the city ordinance on PBD² (The city of Austin 2016).

² A community meeting is required before the application for a PBD. At least two weeks before the community meeting, information must be sent by e-mail to all associations registered in the area and at least two posters must be put up per block providing information about the community meeting, etc.

4.1.2 Defining the rules for the PBD through a city ordinance

The municipality defines the rules and functioning of the PBD in a city ordinance. This may include obligations and mandates for stakeholders and the municipality, how the revenues are to be spent, how the charges are set and changed, who has the initiation right for a new PBD, etc. (see e.g. The city of Austin 2016). In Boulder, Colorado, the PBD includes both on-street and off-street parking, whilst the other studied cases only include on-street parking charges.

4.1.3 Use of revenue

One important aspect concerns how the revenues are to be returned to the community. Many cities opt for only including additional parking charges (e.g. increased charges, more hours, and more metered places) in the PBD. The reason for this is to avoid reducing the revenues for the municipality. Furthermore, proponents argue that if the charges would not have been possible without a PBD programme, the municipality does not lose any revenues by returning the revenues to the community (Shoup 2004).

The additional revenues from parking charges after expenses are then allocated between the community and the municipality. How the revenues are allocated may differ between areas, for instance in Austin 51 % of the revenues are returned to the community while 80 % of the revenues are returned to the community in Washington (ULI 2012). The municipality's part of the revenue can either go to the municipality's general fund or finance the municipality's additional obligations in the community (e.g. additional parking surveillance) (ULI 2012).

The municipality can decide to earmark the communities' part of the revenues to a specific type of measure. For instance, the PBDs in Washington DC can only use the revenues to finance measures that facilitate alternatives to car traffic (ULI 2012). From a traffic planning point of view this is interesting, as it makes car traffic less attractive and the alternatives more attractive.

PBD programmes that involve residential areas often exclude residential parking from the PBD (Canepa 2013). They offer residents in the area a certain number of free residential parking permits and a number of permits for visitors. The rationale behind this measure is that it increases acceptance for the programme, as people living outside the area are less likely to complain (Shoup 2004).

Examples of measures that have been financed by PBD programs are free transit cards for employees working in the PBD area and bike share programs in Boulder (ULI, 2012), in Old Pasadena measures such as street furniture and additional services were financed (such as more police patrols) (Shoup, 2005).

4.1.5 Start with a pilot project

Many cities have started with a pilot project to test the PBD programme. This enables them to test the measure on a smaller scale before deciding whether it should be permanent and whether it should be used in more areas (ULI 2012). For instance, Austin started with a small pilot project before implementing a permanent PBD programme.

4.1.6 Possibility to implement measures before charges are introduced

In some areas, such as Old Pasadena, certain measures were implemented before the charges were introduced (Kolozsvari and Shoup 2003). In Old Pasadena, the city borrowed money to implement some measures before the charges were introduced. Part of the revenue from the charges was then earmarked to repay the debt. The idea behind this was to show visible results at the outset, instead of having to wait several years before any measures are implemented.

4.2 Why parking charges? Expectations and challenges with parking charges in Stockholm

4.2.1 The context in Stockholm

The City of Stockholm has the ambition of building 140 000 new apartments between 2010 and 2030 (Stockholm stad 2016a). Furthermore, the city has ambitious environmental goals, for instance to reduce greenhouse gas emissions by 70 % between 2010 and 2030 (Stockholm stad 2016e). In order to be able to both build 140 000 new apartments and reach the greenhouse gas emission targets, space-efficient and less environmentally hazardous transport modes need to be prioritized. The City of Stockholm therefore has the goal of reducing the number of car trips (Stockholm stad 2016b) and has the objective to prioritize walking, cycling and public transport in the Urban Mobility Strategy (Stockholm stad 2012).

The city has, in line with the Urban Mobility Strategy, formulated a parking strategy. The objective of the parking strategy is to deal with parking in a comprehensive and integrative way, addressing both parking requirements in new buildings and on-street parking regulations (Stockholm 2016c).

As a part of the parking strategy, the City of Stockholm has also decided to extend on-street parking charges in Stockholm, both by charging for more hours in the inner city and by introducing on-street parking charges in the periphery. Parking charges are to be gradually implemented in the periphery starting on the 1st of September 2016.

4.2.2 Why on-street parking charges?

The reasons for implementing on-street parking charges are closely linked to the scarcity of available land as well as to the environmental challenges in the city. Parking is just one of many important functions in the street, and there is often not enough space for all functions to co-exist. Furthermore, the streets are not dimensioned to cater for current traffic volumes, and the traffic situation is expected to deteriorate with the estimated population growth if no measures are taken (Stockholm stad 2016a). This may cause congestion and cruising for parking. The informants argue that people need to travel less by private car and that cars should park in car parks instead of on the streets to a greater extent. The City of Stockholm is therefore prioritizing transport modes that occupy little space, such as walking, bicycles and public transport, over private cars. The problematic parking situation is not only limited to the inner city. The areas bordering the inner city have problems with too many parked cars, as people living in the inner city and commuters to the inner city park their cars in these areas to avoid parking charges and congestion charges. As a consequence, there are few available parking spaces and cruising for parking prevails. Parking charges are one of several important instruments that can help the city steer the traffic towards more space-efficient transport modes. Furthermore, parking charges are seen by some politicians as a measure that can help the

city to reach its greenhouse gas emission targets. One of the interviewed strategic traffic planners commented on this, stating that:

"[...] more people need to park in car parks instead of on the street, so we can use the street for other functions that have higher priorities. And for that to happen we need to adjust the prices. But it is politically difficult to change something that has been free for a long time and to charge for it."

Strategic traffic planner 1, the City of Stockholm

One of the reasons for extending parking charges into the suburbs is to ensure that there is reasonable accessibility in a growing city. According to the interviewed chief strategy officer, the parking plan has several objectives. The principal objective is linked to the ambition of building 140 000 new residences, which will mainly be done by densifying existing areas. There is a risk that traffic volumes will increase, and parking charges are one important measure that can limit this growth and ensure reasonable accessibility in the city. On a more local scale, the objective of the parking plan is to get more people to choose not to own a car and to use a car club instead, and to get more people to park in car parks instead of in the street. This in turn will free up space on the street that can be used for purposes other than parking. The interviewed deputy mayor expressed the same thing in the following words:

"There are several objectives [with the parking charges]. To create accessibility, there are many cars and few available car parking spaces. Cars that are not needed have to be removed. [...] We don't want residents to park on the street automatically instead [of parking at the development]. [It is important] that they have to pay for on-street and off-street parking."

Deputy mayor, the City of Stockholm

The civil servants and politicians in Stockholm thus see on-street parking charges as one of several important instruments that can help the city to reach the desired goals.

4.2.3 Public acceptance is a key challenge for parking charges

Even though on-street parking charges are deemed important policy measures, there are some factors that may make implementation more difficult. All the informants mention acceptance as the principle obstacle to parking charges. Some also highlighted that there is a risk that parking charges will increase inequality, i.e. have distributional welfare effects.

The interviews in this study took place during the public consultation on the parking plan. The civil servants interviewed explained that they were prepared to receive plenty of complaints, but most stakeholders were fairly positive and they did not receive as many complaints and protests as expected. The complaints were mostly limited to two specific issues, namely the new charges for disability permits and for motorcycle parking. Some stakeholders also highlighted the need to improve alternative transport modes at the same time as introducing parking charges. Still, the biggest challenge is deemed to be acceptance. In the words of the chief strategy officer:

“The biggest challenge is acceptance. But, if you had asked me a couple of months ago, I would have told you that I thought it was a much larger problem than I think it is today. Before the parking plan was sent out for public consultation we were totally prepared to go down into the trenches, more or less. We thought that we were going to be attacked, that there would be a torchlight procession towards the “tekniska nämndhuset”³, but I would say that this has not been the case. There are some issues and some places where people are very upset, or where they would like to tell us how they want us to change the proposal, but there has not been any general indignation, which I think is rather interesting. It is very exciting, and I would like to understand why it is so. If it is because people have not understood, or if the message has not reached out, or if we have gained a certain acceptance for doing these things for the city to grow and for car traffic to decrease.”

Chief Strategy Officer for transport & streets, the City of Stockholm

One of the interviewed heads of department fears that protests may come when people start paying for parking. The public consultation involved interest groups and institutions, but seldom individual citizens. It is not certain that the views of the stakeholders participating in the public consultation represent the public opinion. Furthermore, civil servants working in a local district in the southern part of Stockholm are convinced that the public will oppose the charges when they are implemented, at least in their community. One of the interviewed heads of department at the City of Stockholm commented on this issue as follows:

“[...] now it [the parking plan] has only been out for public consultation. I believe that the day we put the poles in the ground, that is when we will begin getting serious comments. [...] Even if we got some media attention I believe that it is only when one sees the effects oneself, when it is an effect on the street where one lives... then people will get in touch. And then we will probably have some acceptance issues.”

Head of department, the City of Stockholm

In addition to the inner city, the areas bordering the inner city also have parking problems. The parking problems are partly due to spill-over effects from the inner city. Some residents in the inner city park their cars in these areas at night to avoid paying for parking, and some commuters to the inner city use these areas as a park and ride facility to avoid paying for parking and congestion charges. The result is that available parking spaces are occupied by people living in the city centre or by those commuting to the city centre. People living in the area thus perceive the lack of available parking spaces to be a real problem. Further out in the outer suburbs, there is less of a parking problem. The acceptance for parking charges is therefore probably greater in the inner suburb than further out.

The interviewed deputy mayor perceives that the opinion is favourable for parking charges, as people see that they are needed. He describes the situation as follows:

³ “Tekniska nämndhuset” is a building where the municipality’s civil servants have their offices.

“To charge for something that has been free of charge is always difficult. It is a challenge to get acceptance for change. We have managed well in Stockholm, as Stockholmers realize that it is needed.”

Deputy mayor, the City of Stockholm

There thus seems to be a certain political acceptance for the parking charges, and most of the informants are surprised that there were not more protests. Some of the informants believe that this may indicate that there is a greater acceptance for parking charges, but some fear that the protests will come when the charges are implemented.

4.3 Parking Benefit Districts – a way to increase acceptance for parking charges?

The purpose of this paper is to understand whether a PBD-inspired programme can contribute to less dependency on cars in Stockholm. The interviews clearly show that the purpose of extending parking charges is in line with this objective. The parking charges are seen as one of several important instruments that can contribute to the reallocation of scarce space for more space-efficient transport modes as well as steering towards the greenhouse gas emission targets. Furthermore, they are seen as an important measure to ensure the availability of parking spaces.

The Parking Benefit District concept was up for discussion when developing the parking plan. There were discussions about using this concept for local commercial centres in Stockholm, but in the end the PBD programme was not included in the parking plan. Some of the informants believe that a PBD-inspired programme can increase acceptance for parking charges by returning the revenues to the neighbourhood and by involving the stakeholders in the community in the decision-making process, and that it would be interesting to test it in a Swedish context, which was also discussed in the focus group. Furthermore, according to the deputy mayor it would be an interesting concept to try if it increases acceptance for on-street parking charges. It would, according to one informant, be interesting to use this concept to give citizens or other stakeholders incentives that increase acceptance for parking charges. However, there is no tradition in Sweden of earmarking revenues, or of transferring the responsibility for the street to stakeholders. The informant argued that if the municipality transfers responsibilities to the community, there is a risk that the community will feel that the municipality is trying to avoid its responsibilities, rather than seeing it as a way to involve the community in the decision-making process. In the words of the chief strategy officer:

“The principle is very exciting, very interesting. And I think it is very exciting as a way to get commercial actors or property owners or even individual citizens to be interested in charging for on-street parking. It could come as a citizen initiative instead of from the municipality. But I also think the potential it gives to local organizations of commercial actors or property owners to take more ownership of their street would be interesting. To remove the need that the municipality needs to come and fix things, and that we can fix the things we need to fix instead. That it will be as we want it to be, this is very interesting. But I wonder how open Sweden is to these things. One expects a lot from the municipality and from the state. But it would be interesting to know if these measures could work in Sweden.”

Chief Strategy Officer for transport & streets, the City of Stockholm

Furthermore, one of the informants believes that the PBD is in line with Stockholm Municipality's goals for social sustainability. The city has a new social sustainability commission where human rights and social sustainability are highlighted. A PBD programme is in line with these priorities as it fosters local participation in public policies. This informant also highlights that it is an interesting approach, but that Sweden does not have the habit of working in this way.

"[...] if feels like it is very much in line with the policies the new deputy mayors in Stockholm are interested in. They are really interested in human rights, social sustainability and such things. We have a social sustainability commission, we have quite a lot of these tasks. [...] This direct focus seems to fit quite well [with the social sustainability goal]. But Swedish municipalities are not used to working with such measures."

Strategic traffic planner 1, City of Stockholm

Participatory budgeting is one of several other similar direct democratic initiatives in Stockholm. This governance measure has recently been started as a test in a suburb in the south of Stockholm. The participatory budgeting model follows a similar process to a PBD programme, with the exception that the funds are directly allocated by the municipality and not connected to parking charges. One of the main arguments for the participatory budgeting project in Stockholm was to engage the public in local decision-making as a way to improve their trust in public institutions and, from a longer-term perspective, to increase participation in national and local elections. Based on our studies we argue that a PBD programme would probably have similar impacts, and can thus be seen as being closely linked to the city's social sustainability goals. Participatory budgets also exist in other European cities, and a PBD program could probably use the same structures as a participatory budget program.

4.4 Parking Benefit Districts – a measure to facilitate alternative transport modes?

Many of the stakeholders in the public consultation took a positive view of the parking plan, but several stakeholders highlighted the need to improve the alternatives to privately owned cars at the same time as parking charges are implemented. The City of Stockholm also conducted ten focus groups with 60 people in Stockholm to get a more nuanced view of the public perception of the parking plan (Stockholm stad 2016d). One of the conclusions from the focus groups was that people want the revenues from the parking plan to be used to improve public transport. The danger that parking charges will increase inequalities was another conclusion from the focus groups.

Revenues from a PBD-inspired programme can be earmarked to promote alternatives to private cars, as in some cases in the USA. The stakeholders in the community would then be limited to using the revenues for measures that promote alternative transport modes. Several of the informants believe that it would be interesting to earmark the revenues from parking charges for mobility measures in the community, although some informants are sceptical. However, the mobility measures should be limited to measures that work by themselves on a local scale. Many measures are part of a larger system and consequently need to be implemented on a larger scale to have an effect. For local centres it could, according to some informants, be interesting to finance measures that increase the

area's attractiveness, as a more attractive centre can attract more customers. This could in turn help local centres to survive.

Even though earmarking revenues for mobility services is an interesting concept from a transport planning perspective, the informants argue that the allocation of revenues is a political decision. Politicians tend to avoid earmarking revenues in order to have more liberty to use the revenues where they are most needed. Furthermore, one informant fears that the concept may put too much focus on parking charges as a source of revenues. The reason for extending parking charges is, according to the informant, not to raise revenues (even though this is a positive side effect) but to solve traffic-related problems. By focusing too much on the revenues from the charges, there is a greater risk that the charges will be perceived as another tax.

Some of the informants say that it is important to discuss and determine what the city's basic responsibility is, and what type of additional measures could be financed through a PBD programme. Several informants also argue that social justice and equity are aspects that it is important to consider. Is it reasonable that the revenues go back to the community, or are there other communities with more acute needs? These are questions that need to be discussed and highlighted before introducing a PBD-inspired programme.

“Personally I think it would be appropriate [to earmark the revenues for mobility measures]. This is similar to how congestion charges works as principle. [...] As a traffic planner, I think it would be appropriate to say that we increase the parking charges in order to achieve better accessibility and better access to parking spaces, and we will use the revenues to promote alternatives to private cars, such as car clubs and better public transport. [...] At the same time, I understand that our politicians prioritize, and choose to prioritize, other issues that need more money at the moment, such as education and elderly care, so I think it is difficult. But of course it could contribute to increased acceptance.”

Chief Strategy Officer for transport & streets, the City of Stockholm

To summarize, it may be interesting to earmark revenues for mobility services or improved attractiveness for local centres from a transport planning perspective. However, this is a political decision and politicians tend to be reluctant, probably for good reasons in the Swedish context, to earmark revenues for specific purposes.

4.5 Parking Benefit Districts – institutional limitations and barriers

There are no institutional barriers that render the 'benefit side' of a PBD-inspired programme impossible in a Swedish context. Revenues from parking charges go to the municipality's central treasury, and the municipality can then decide to reallocate the revenues to different areas in the city. The residents in the area can then propose measures and participate in prioritizing the measures. Similar pilot projects, for instance participatory budgeting, already exist in Stockholm⁴. However, there are some aspects that may limit the scope of possibilities, and that thus need to be taken into account.

⁴ A similar process to a PBD programme, with the difference that the revenues come directly from the central treasury and not from parking charges.

First of all, on-street parking charges can only be used for traffic management purposes (regulated in law 1957:259). This means that on-street parking charges cannot be implemented with the sole purpose of raising revenues. Secondly, the decision to implement on-street parking charges and the level of the charges are determined by the city council. Thirdly, revenue use has to follow the “principle of equal treatment”. This means that the municipality cannot favour individual citizens, companies or public institutions. In more concrete terms, this means that the municipality cannot use the revenues from parking charges for measures that benefit a limited group of people or that benefit specific private companies. Furthermore, the municipality cannot transfer money to other public institutions such as the county council, and it is the county council that is responsible for the public transport system in Stockholm. This means that the municipality has limited opportunities to finance public transport improvements. There are some exceptions to these rules. The municipality can, for instance, favour certain marginalized areas and give grants to associations. They can also manage activities on their own, but the City of Stockholm does not want to do so in areas where there is an existing market.

This means that the City of Stockholm can implement a PBD-inspired programme, but there are some limitations, especially in terms of revenue use. One important limit is that it is difficult to use a PBD programme to improve public transport, even though this is demanded by many stakeholders. It is also important to remember that it is only the city council that can implement parking charges, and that they can only do so legally for traffic management purposes.

5. Discussions, conclusion and recommendations

The objective of this article has been to qualitatively assess whether and how a Parking Benefit District-inspired programme could be transferred to a European context, and if there is a potential to contribute to reduced car dependency. Our main conclusion is that it still seems probable that PBD measures are transferrable, and that they might contribute to reduced car dependency. Regarding the ‘how’ part of the aim, we argue that it could contribute in two principal ways; either by enabling new or higher parking charges (for instance by increasing acceptance for parking charges), or by providing improved alternatives to private cars, depending on what benefits the parking fees would be used for. Furthermore, as participatory budgeting, which exists in several European countries, is similar to a PBD program, with the exception that revenues do not come from parking charges, a similar design could probably be adopted for PBD-inspired programs in Europe. Participatory budgeting in Europe is adapted to the national context and is consequently designed differently in different European countries. Some draw more heavily on deliberation and other countries concur more to voting, some include a range of different stakeholders whilst others exclude private companies. For a PBD-inspired program to draw on a similar design seems feasible.

In this section, we will first address the three more specific research questions that we posed in the aims section. Finally, we will give a few recommendations for how, when and where a PBD-inspired programme could be designed and implemented in Stockholm.

5.1 Could PBDs increase acceptance for parking fees, which in turn could decrease car dependency?

A PBD-inspired programme can contribute to reduced car dependency if it helps to increase acceptance for parking charges. Both the literature and the findings in this study suggest that acceptance is a major barrier for implementing (parking) charges (Banister 2008). If a PBD-inspired programme makes it possible to implement parking charges, where it would otherwise not have been possible, then a PBD-inspired programme could contribute to reduced car traffic. Likewise, if a PBD-inspired programme can create conditions for higher parking charges, then the programme could also contribute to reduced car dependency.

Interviews highlight that there have been fewer protests against the parking charges than expected, which could indicate that acceptance for parking charges may be less of a problem than expected. These conclusions are drawn from the public consultations on the parking plan (involving institutions, associations, interest groups, etc., but seldom individuals), and indicate that there seems to be greater political acceptance for using charges as a way to solve traffic-related problems. Greater political acceptance is also likely to increase the possibility of implementing parking charges in Stockholm. However, it is not certain that the general public will accept the charges just because they did not oppose them during the public consultation. The public may not be aware of the plans and they may start protesting when the plan is implemented and when they see the charges on the street. It is too early to say whether or not there will be greater acceptance for parking charges among the public. It is therefore not possible to rule out the possibility that people may oppose the charges in some places, albeit to a lesser extent than previously, and that measures that increase acceptance can therefore help to ensure a smooth implementation of parking charges.

Experiences from the USA indicate that a PBD programme increases acceptance for parking charges, and that it can be a factor that makes the implementation of parking charges possible. For instance, Kolozsvari and Shoup (2003) show that it was a PBD programme that made parking charges possible in Old Pasadena shopping centre. They argue that the Business Improvement District (BID) only accepted parking charges in the area when it was clear that the BID could prioritize how the revenues were to be spent. However, it is not certain that a programme that has been successful in raising acceptance in the USA will do so in a Swedish context. Sweden does not have the tradition of working with these types of participatory planning processes, even though some similar pilot projects such as participatory budgets are emerging. As Sweden, as well as many other European countries, has the tradition of a planning paradigm where the municipality has a stronger role than in the USA, this new collaborative planning paradigm may be seen as a way for the municipality to avoid responsibility, instead of a way to empower stakeholders. It can take time to change planning paradigms. It is therefore important to be clear about the objectives and possibilities of the PBD programme. If expectations that cannot be fulfilled are created, there is a risk that the plan will lose legitimacy.

In the literature on PBD, it is generally argued that a programme where the revenues benefit a smaller group of people (e.g. the residents in the area) and where the charges are paid by a larger and more widespread group of people (e.g. the people commuting to or visiting the area), there tends to be greater acceptance for charges than the other way around (Shoup 2004; Shoup 2005). Furthermore, an inclusive process where people are involved in decision-making also increases

acceptance for parking charges. This could be because the prioritized measures are more in tune with people's needs and expectations, they understand the rationale behind the measure better (Banister 2008), or participation in the decision-making creates a certain commitment to support the parking charges. This indicates that there are incentives with a PBD programme that can increase the propensity for people participating in the process to accept parking charges.

A problematic question that may counterbalance the positive effects of a PBD programme is participation rates and the socio-economic characteristics of the participants. Similar participatory and direct democratic planning procedures (e.g. participatory budgeting) indicate that the participation rate is fairly low in these processes, even though they are open to everyone in the area. In a participatory budgeting project in Stockholm, the participation rate was about 7 %, which is high compared to similar projects in Sweden (SKL 2011). Only a small proportion of the population therefore tends to participate. There may also be a risk that this participation is skewed towards a certain socio-economic group. If participation is skewed, the legitimacy of the programme may be reduced. Furthermore, it is not certain that the PBD programme will give rise to the same commitment among those who do not participate in the programme. It is likely that the normative commitment will be lower for those who do not participate in the process. If the measures implemented are seen as beneficial by stakeholders in the community, and are clearly linked to the parking charges, they may however contribute to more affective commitment even among those who do not participate in the process. In order to achieve this, efforts would be needed to inform stakeholders about the measures and their link to the parking charges. This could be facilitated if the measures are implemented at the same time as the parking charges are introduced.

Another problematic question that needs to be highlighted is the possible redistributive effects at a municipal level. If a PBD programme is applied on a larger scale, more revenues will be returned to areas that attract a large number of car visitors. As areas attracting more visitors also tend to be more affluent, there is a risk that already affluent areas will receive more funds whilst more marginalized areas receive less funds. If this is the case, the PBD programme may lose legitimacy, and consequently both popular and political support for the programme may decrease. In this case it may be preferable to use allocation keys for the distribution of revenues (e.g. according to the number of people in the area, with more revenues going to marginalized areas). This would however reduce the direct link between the parking charges and the measures implemented.

Finally, it is important to decide which stakeholders will have the right to participate in the PBD programme, as this may also affect the legitimacy of the programme. Are only citizens allowed to participate, or should both citizens and private actors be allowed to participate? If different types of stakeholders are invited to participate (e.g. citizens, associations and private actors) then it is important to have clear rules about the mandate of different stakeholders.

To sum up in terms of acceptance, we argue that although the Swedish context is clearly different to the US – in terms of e.g. prevalence of participatory planning as well as car dependency – PBD-like measures could also increase acceptance of parking charges in a city like Stockholm. However, it seems that efforts would be needed to inform stakeholders about the PBD-like measures and their direct link to the parking charges. This could be facilitated if the measures are implemented at the same time as the parking charges are being introduced. Finally, distributive justice at the entire city

level surfaced in the focus group, and might need to be addressed; one idea is to use allocation keys to redistribute part of parking revenues.

5.2 Mobility services – a way to reduce car dependency?

In the scientific literature, certain authors argue that a combination of push and pull measures provides an efficient package to reduce car traffic (Marshall and Banister 2000; Banister 2008) and parking charges can be one of several efficient instruments in such a policy package. A PBD-inspired programme could promote such a policy package by implementing both parking charges and measures that ameliorate the alternatives to private cars. Furthermore, many stakeholders asked for improvements of alternatives to private cars (especially public transport) in the public consultation of the parking plan.

As argued above, financing improved alternatives to private cars can increase acceptance for parking charges by clearly showing that the revenues from the parking charges are returned to the community, especially if the people in the community deem the measures to be desirable.

Apart from increasing acceptance for parking charges, improving the alternatives to private cars can contribute to reduced car dependency by facilitating a less car-dependent lifestyle. If measures that facilitate everyday life without access to a private car are provided, it is possible to reduce the number of car trips for households with access to a private car and to facilitate a car-free lifestyle for those without access to a private car. These measures can, together with parking charges, contribute to reduced car dependency in Stockholm. The advantage with a PBD programme is that the actors in the community can participate in prioritizing the measures to be implemented, which may result in measures that are more adapted to their needs.

To sum up in terms of mobility services, there seems to be a feasible benefit side to a PBD-inspired programme, with some restrictions. To actually reduce car dependency, the policy package should include measures that ameliorate the alternatives to private cars and facilitate car-free everyday life. Such policies could of course be implemented regardless of whether or not there is a PBD programme in place. However, a PBD would provide opportunities for residents and local stakeholders to participate in prioritizing measures, e.g. by proposing and voting on them, etc., which may result in measures that are more adapted to specific local needs.

5.3 Restrictions on Parking Benefit Districts and ideas for possible design in Stockholm

There are some legal barriers that limit the scope of opportunities to implement PBD-inspired programmes in Sweden. Most stakeholders seem to ask for improvements in public transport, but it is not possible for the municipality to transfer money to the county council, which is in charge of public transport. It is important to be clear about these limitations in order not to give rise to expectations that the municipality cannot live up to. Otherwise, the PBD programme may lose legitimacy. These particular limitations do not apply in all European countries. For instance Gent in Belgium and in Amsterdam in the Netherlands they are already earmarking a part of the revenues from parking charges to public transport investments (Pressl et al. 2017; de Lange 2014).

Another limitation is that the revenues from parking charges cannot be given to private companies or favour certain citizens. This leaves the possibility of financing measures that the municipality is in

charge of or funding measures through associations. The pilot project on participatory budgeting in Stockholm funds activities in a community project, and revenues from on-street parking charges could be used in a similar way. In this pilot project, the municipality dedicated a lump sum to activities in the community. Citizens are invited to propose activities and then to vote on the proposed activities. The activities that receive the most votes are then implemented.

If the revenues from a PBD-inspired programme, following a similar design to participatory budgeting, are dedicated to sustainable mobility measures, the measures could for instance include a co-operative car or cargo bike club, a co-operative bike service, bike training, etc. If the measures are implemented directly by the municipality, it is important that they are local in scale (for instance bike parking spaces) and that they are additional measures that would not otherwise have been implemented. Most measures in the studied PBD programs in the US are possible to implement in Sweden, for instance, streetscape measures or bike sharing programs. However, it would be difficult to finance transit cards for public transport, as in the Boulder case, due to the principle of equal treatment of all citizens in Stockholm. However, as mentioned above, this limitation does not exist in all European countries.

In summary, restrictions seem mainly legal, in that it is not possible for Swedish municipalities to transfer money to the county council (which runs all public transport) or to private companies, or to favour certain citizens. However, funding from parking fees could certainly be given to non-commercial associations. Finally, our findings support the recommendations from literature that measures should be implemented at the same time as (or before) the parking charges, as this would ensure a more direct link between the parking charges and the measures implemented.

6. Recommendations

The City of Stockholm has a good opportunity to test the PBD concept during the implementation of the parking plan. It is recommended that the concept should be tested in one of the inner suburbs, as the potential acceptance problems are likely to be less severe in these areas. A pilot project would make it possible to test the concept and adapt it to the Swedish context, and to study whether it increases acceptance for parking charges and whether mobility measures can further reduce car dependency. If the concept proves to be efficient in the more favourable conditions of the inner suburbs, it can be used in the subsequent implementation of the parking charges in the outer suburbs. In areas where there is low acceptance for parking charges, a PBD programme may be a measure that pushes acceptance over the tipping point and thus makes parking charges possible.

It would also be interesting to study the possibility of combining on-street and off-street parking in a PBD programme. When on-street parking charges are implemented, off-street parking is also affected. By including both on-street and off-street parking in a PBD programme, it would be possible to deal with parking in a more holistic way. This would, for instance, be interesting to test in commercial areas with ample off-street parking.

The PBD concept could also be tested in other European cities with plans to implement on-street parking charges. One of the priorities in Sustainable Urban Mobility Plans (SUMP) is to increase citizen participation in urban transport planning (Wefering et al. 2013), and a PBD program is a possible tool to do this. Our findings indicate that a PBD program is similar to Participatory Budgeting, and as Participatory Budgeting already exist in many European countries it would

probably be feasible to build a PBD program on a similar structure. The design of participatory budgeting in Europe varies between different countries as they have been adapted to the local planning tradition. Sintomer et al. (2008) identifies six different typologies for participatory budgeting in European countries, and a PBD program could build on a similar design. Attention, however, needs to be taken to the national legislation and planning tradition when implementing a PBD project.

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